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ABSTRACT

One of the basic principles of the Language Development Approach is that students must learn the language necessary to understand, talk, and write about all subject areas in order to succeed in school. This book contains information about teaching primary school science in the Northwest Territories with lessons that emphasize language. The goals of the unit are to (1) develop student language proficiency; (2) provide opportunities for students to use language in many different situations and for many different purposes; (3) develop student listening, speaking, reading, writing, and thinking skills including the science process skills; and (4) expand student knowledge of the science concepts related to fish. Following a section on resources (background information on Canadian fish, resources included with this unit--various pictures of fish, related English materials--magazines, lists of children's books about fish, teacher's resources, films, etc., and related aboriginal language materials), lesson plans on six topics (populations, appearance and behavior, habitat of fish, food, life cycle, and people and fish) are presented. Activity ideas for science/social studies, mathematics, language arts, music/poems/stories, art, physical education/movement, and special activities are suggested. Each lesson plan contains the following segments--exercises or activities: English vocabulary, English sentence patterns, English language concepts, special materials required, concept development/language exposure, language practice, and application. Poems, songs, and stories on this subject conclude the guide. The lessons are appropriate for students whose first language is English as well as for students who are learning English as a second language. (PR/CW)

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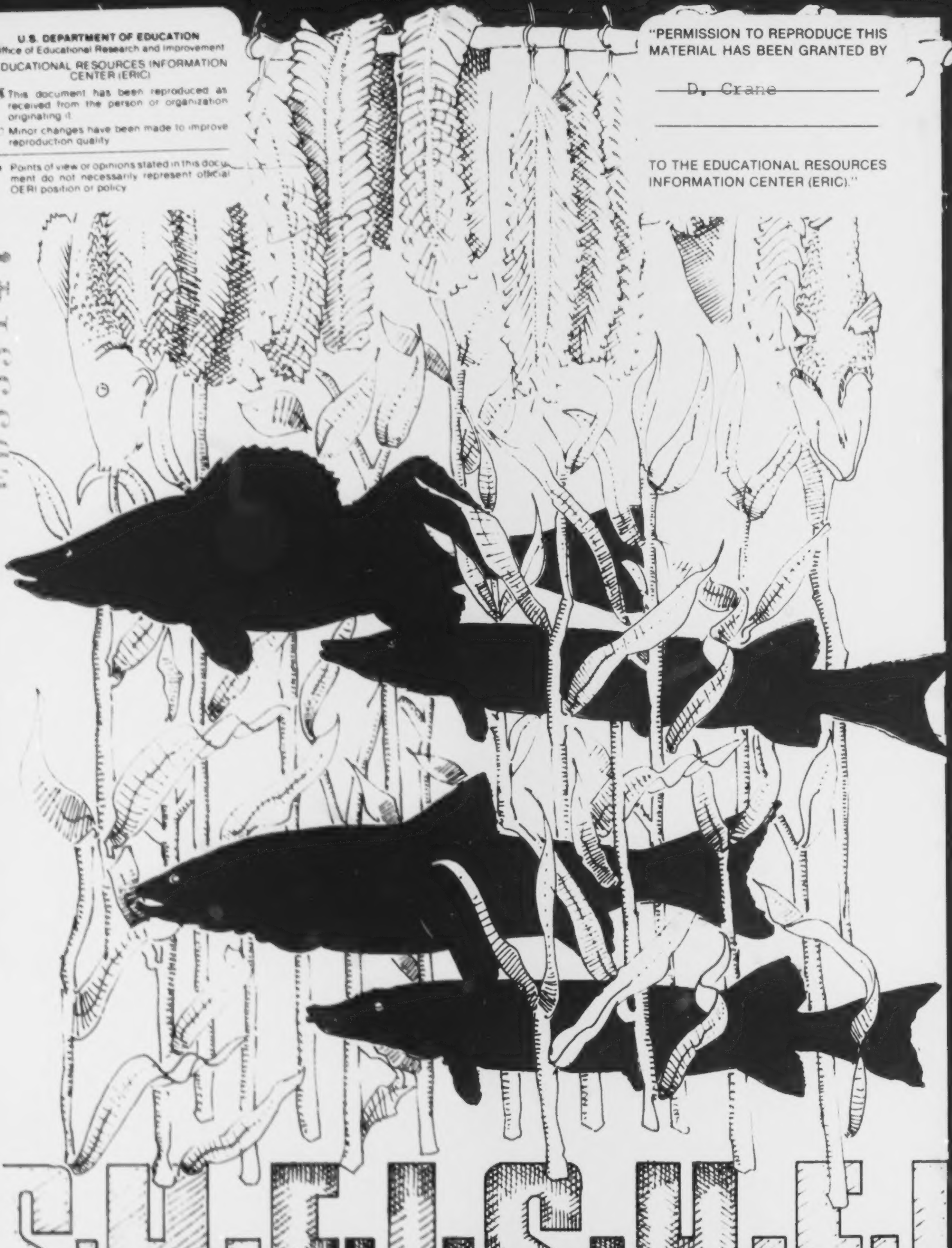

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Fish

A Language Development Unit for Science
Life and the Environment
Populations

Grade Three

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SCHOOL PROGRAMS
DEPARTMENT OF EDUCATION
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FOREWORD

Parents, educators, and students themselves all recognize the importance of language in the school curriculum. In order to have appropriate language programming, students need to have their experiences, skills, knowledge and, particularly, the language they bring to school identified and used as the basis for the program. Language programs should begin with and build upon these strengths. Where a child is dominant in a language other than English, he should be taught in that language. In many communities in the N.W.T., that means that the language of instruction should be Inuktitut or one of the Dene languages. Students in these communities need to gradually learn English as a second language. In instances where students speak a dialect of English upon school entry, the school's role is to respect and make use of the language the students bring. The school program should also help those students extend their English proficiency by learning the language used in varied communication situations and the language necessary for success with the academic curriculum. The aim of language instruction, where applicable and where possible, is to produce bilingual students.

Successful bilingual education requires good teaching in both languages. For many years northern educators have wrestled with the difficulties of teaching English with inappropriate commercial materials from the south. Teachers have been requesting assistance with how to most efficiently and effectively teach English as a second language/dialect. The Department of Education has determined that the Language Development Approach is the most suitable way to meet the needs of ESL/D students. The Department has developed these units for teachers to use in their classrooms. The Department therefore expects teachers to implement these units unless they can identify and justify to their Superintendent something more appropriate for their students.

Ed Duggan
Assistant Deputy Minister
Schools Branch

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The late Bonnie Pugh and Cathy McGregor adapted Jim MacDiarmid's Language Development framework which forms the structure for each lesson.

Refining the format of and brainstorming activity ideas for the Language Development units involved the assistance of many northern educators. Members of the Teacher Committee who helped develop and pilot sample units included:

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Table of Contents

Teacher's Notes

Language Development/Science Units 1
Unit Overview 2
How to Teach the Fish Unit 3
Introduction to the Language Development Approach 16

Resources

Background Information on Fish 24
Resources Included With This Unit 34
Related English Materials 35
Related Aboriginal Language Materials 42
Initial Assessment Activities 43

Lesson Plans

Activity Ideas Chart: Topic A - Populations 50
Lesson: Fish Populations 52
Activity Ideas Chart: Topic B - Appearance and Behaviour 58
Lesson: What is a Fish? 60
Lesson: The Outside of a Fish 66
Lesson: What's Inside a Fish? 75
Lesson: The Fish With the Deep Sea Smile 80
Activity Ideas Chart: Topic C - Where Fish Live 88
Lesson: Fish Habitats 90
Activity Ideas Chart: Topic D - Food 94
Lesson: Jacky the Jackfish/Charlie the Char 96
Activity Ideas Chart: Topic E - Life Cycle 108
Lesson: Fish Hatch From Eggs 110
Activity Ideas Chart: Topic F - People and Fish 114
Lesson: Let's Go Fishing 116
Lesson: The Big, Big Fish (vocabulary) 124
Lesson: The Big, Big Fish (vocabulary & sentence patterns) 130
Lesson: We Eat Fish 134
Culminating Activities 140
Evaluation Activities 142
Poems, Songs and Stories 143

LANGUAGE DEVELOPMENT/SCIENCE UNITS

SCIENCE THEME	GRADE/YEAR		
	1	2	3
LIFE AND THE ENVIRONMENT*	LIVING/NON-LIVING THINGS		
	Arctic/Sub-Arctic Land Animals	Birds	Marine Mammals (Whales)
	PLANTS		
	POPULATIONS		
	Bears/ Polar Bears	Dinosaurs	**Fish**

MATTER AND ENERGY	Popcorn	Magnets	Water
	ENERGY and ENERGY CONSERVATION		

EARTH, SPACE AND TIME **	SUN, MOON AND SHADOWS		
	AIR AND AIR PRESSURE		

* Other animals are covered under Social Studies topics: Fall, Winter and Spring.

Moose/Caribou	Seals
Beaver/Muskrat	Other fur-bearing animals
Rabbits	

** Weather will be covered in a Science/Social Studies/Math unit.

Topic A - Populations

1. What is a population?
2. What fish populations are found in the N.W.T.?

Topic B - Appearance and Behaviour

1. How are fish similar? How are they different?
   - physical appearance
   - ways in which they move and react
2. What structural adaptations do fish have that enable them to survive in their environments?

Topic C - Where Fish Live

1. What is a habitat?
2. Where are fish found?
3. Why do some fish live in different places at different times of the year?

UNIT OVERVIEW: GENERAL CONCEPTS

FISH

Topic D - Food

1. What foods do fish eat?
2. How do fish get their food?

Topic E - Life Cycle

1. What is the life cycle of a fish?
   - hatch from eggs, grow, reproduce, die.
2. What happens to young fish after they hatch?

Topic F - People and Fish

1. How does the existence and behaviour of fish affect the well-being of man?
2. How does the existence and behaviour of man affect the well-being of fish?

HOW TO TEACH THE "FISH" UNIT

How does the topic "Fish" relate to the science program?

The Elementary Science Program (1-3 and 4-6, 1986) contains several themes which include concepts related to animals. The following chart shows how the topics outlined on the General Concepts/Unit Overview sheet (see Table of Contents for page number) and the lessons in this unit relate to the concepts suggested in the program guide.

Primary Science Guide	Unit
1.1 **Living and Non-living Objects**	Topic D - Food Lessons: Jacky the Jackfish/ Charlie the Char
1. Objects are living or non-living based on the following characteristics: - need/don't need food and water - grow/don't grow - reproduce/don't reproduce - die/don't die	Topic E - Life Cycle Lesson: Life Cycle of Fish
2.1 **Properties of Living Objects**	
2. Living things can be classified according to properties.	Topic B - Appearance & Behaviour Lesson: What is a Fish?
5. Animals live in many different habitats within an environment.	Topic C - Where Fish Live Lesson: Fish Habitats
7. Plants move in response to stimuli whereas animals have locomotion.	Topic B - Appearance & Behaviour Lesson: The Outside of a Fish
3.1 **Populations**	
1. The term population describes a group of organisms of the same kind in a particular environment.	Topic A - Populations Lesson: Fish Populations
2. The place of a population is its habitat.	Topic C - Where Fish Live Lesson: Fish Habitats
3. Populations in a particular habitat form a community. These populations are usually interdependent.	Topic D - Food Lesson: Jacky the Jackfish/ Charlie the Char

4. The existence and behaviour of living organisms affects the well-being of mankind and/or the overall community life and vice-versa.	Topic F - People and Fish Lessons: Let's Go Fishing The Big, Big Fish We Eat Fish
4.1 Adaptation to the Environment	
1. Camouflage is one kind of adaptation.	Topic B - Appearance & Behaviour Lesson: The Outside of a Fish
2. A structural adaptation may help an organism to survive.	Topic B - Appearance & Behaviour Lessons: What is a Fish? What's Inside a Fish The Outside of a Fish
5. Some organisms develop through a life cycle with each stage exhibiting special adaptations for each habitat during each stage of the cycle.	Topic E - Life Cycle Lesson: Life Cycle of Fish
7. Organisms have behavioural adaptations to the environment.	Topic B - Appearance & Behaviour Lessons: What is a Fish? What's Inside a Fish The Outside of a Fish
8. Organisms have structural adaptations to the environment.	
5.1 Interdependence of Living Things	
1. Individuals interact within a population.	
2. Populations of animals depend on other populations for food.	Topic D - Food Lesson: Jacky the Jackfish/ Charlie the Char
8. An organism obtains what it needs to survive from the habitat in which it lives. Each organism living in its habitat is part of a community.	Topic C - Where Fish Live Lesson: Fish Habitats Topic D - Food Lesson: Jacky the Jackfish/ Charlie the Char
10. Humans interact with other organisms to become part of a network of populations.	Topic F - People and Fish Lessons: Let's Go Fishing The Big, Big Fish We Eat Fish

The topic "Fish" also relates to the following concepts outlined in the Elementary Social Studies program (1-6, 1979).

Social Studies Guide	Unit
Grade One: Topic A I'm the Only One Like Me	
6. People are different from (other) animals.	Topic B - Appearance & Behaviour Lesson: What is a Fish?
Grade Two: Topic D My Community Changes	
2.2 People do different things according to the seasons: - economic activities	Topic F - People and Fish Lessons: Let's Go Fishing The Big, Big Fish
2.3 People eat different foods at different times of the year.	Topic F - People and Fish Lesson: We Eat Fish

Using the topic "Fish" as an organizing theme, this unit thus translates the concepts from the Science and Social Studies program guides into a set of teaching lessons. As you can see from the chart that outlines all the Science units for grades one through three, other units introduce and reinforce the concepts related to living objects and populations.

What part of my program is this unit?

One of the basic principles of the Language Development Approach is that students must learn the language necessary to understand, talk and write about all subject areas in order to succeed in school. Most of the material in the "Fish" unit is related primarily to Science; it is therefore part of your Science program. It also contains lessons which emphasize language and concepts from other subject areas. At the beginning of each lesson is a statement which indicates which subject area that lesson emphasizes. You can teach the Social Studies and Literature lessons during Social Studies and Language Arts periods, or during Science, whichever you prefer.

What are the goals of this unit?

The goals of this unit include:

- developing students' language proficiency. The purpose is to increase their storehouse of language items and meanings (vocabulary) and to build their intuitive knowledge of structures (sentence patterns). The intent is not to have students study how the language works or to analyze it.
- providing opportunities for students to use language in many different situations and for many different purposes.
- developing students' listening, speaking, reading, writing, and thinking skills. The thinking skills developed include the scientific process skills described in the science program guide.
- expanding students' knowledge of the science concepts related to the "Fish" topic.

What grade level is this unit?

Schools throughout the N.W.T. have different ways of organizing students into classes. There are classrooms which consist of only one grade, while others combine two or even three grades. Small schools sometimes have to put primary and intermediate students together. Regardless of the grade level(s), students in each class will have a variety of levels of proficiency in English.

It is difficult to present a unit which teachers can use easily in all these different situations. The chart which outlines Science topics for grades one to three lists this unit under Grade Three. You will find, however, that the unit contains a variety of language items, sentence patterns and activity ideas. Some of the concepts and some of the language activities in the lessons are more suitable for younger/older students. This was done to accommodate the range of abilities which exist even in classes which are supposed to be one grade level and also for those teachers who have multi-grade classrooms and want to teach the same unit to the whole class.

What else do I need to know before I teach this unit?

It is important to understand the Language Development Approach which forms the basis of this unit and the Language Development Framework which forms the structure of each lesson. Please read the explanation of them which follows this section. It introduces the parts of each lesson and explains their purpose. Once you have read the description several times and taught a few lessons you probably will not have to read it for every unit.

How long should I spend on this unit?

The length of time you spend on each lesson and on the unit as a whole will depend in part upon what your students already know about the concept/topic and how interested they are in it. As with any unit you teach, however, the success of this unit will depend largely upon your interest in and enthusiasm about the topic. If you make the lessons stimulating to students, they will want to spend more time studying the topic.

In general, it is more important to cover a few concepts well and ensure that students incorporate the language items for those concepts into their language repertoires than to cover everything in the unit. If students begin to lose interest in the topic, wind up what you are doing and start a new unit.

Which lessons do I teach?

This unit includes a number of lessons. As the person who knows your students and their needs best, you must decide which lessons are appropriate for your students and which are not. You may decide not to teach certain lessons because:

- students already know the concept and the language covered
- students are not interested in that aspect of the topic
- the language is too difficult or is not appropriate
- the concepts are too difficult or are not appropriate

The initial assessment activity will help you identify which concepts and vocabulary students already know and therefore which lessons you can skip and which are more appropriate for you to teach. You might also want to check the students' cumulative files and/or discuss with other teachers which topics students have already covered. It is important to keep a record of which lessons you teach so that other teachers will not repeat that material in future years.

In what order should I teach the lessons?

You can teach the lessons in the order in which they appear in the unit or you can teach them in any order you think is appropriate for your students. Generally, the Science or Social Studies lesson for a topic should precede (or be taught at the same time as) the Language Arts lesson for that topic. The Language Arts lesson uses poetry or literature to reinforce the concepts taught during Science/Social Studies.

How do I adjust these lessons to meet the particular needs of my students?

The lessons in this unit are SAMPLE lessons. They may be used in classrooms where English is the first language of students (and they are very proficient), where students speak a dialect of English, or where English is a second language for students who come to school proficient in an aboriginal language. Because of this diversity of linguistic situations it is difficult to design lessons which are equally appropriate in every classroom. These lessons provide an example of the kind of language and activities which are appropriate to teach the concepts related to the topic. You may be able to teach them exactly as they appear here. If you feel some aspect of a lesson is not appropriate for your students however, feel free to adapt it to meet their needs. You may wish to use some of the activity ideas to make up lessons of your own and use them instead of the ones included. Some of the most common ways in which you might need to adjust the lessons include changing the:

a) amount or type of vocabulary and/or sentence patterns in a lesson. During the initial assessment activity you may find that students have/don't have particular vocabulary items or sentence patterns. You may need to make the language in each lesson simpler or more difficult, depending upon your students' proficiency. You may want to introduce fewer or more vocabulary items or sentence patterns. Students who are more proficient need to concentrate on vocabulary; you may want to omit all sentence patterns for them.

b) number of listening and speaking activities. Students who speak little or no English or who are not familiar with a topic require extensive aural/oral practice. This is particularly true of primary ESL students. You may want to delete reading and writing activities altogether for such students and substitute more listening and speaking activities. Students who are having difficulty speaking need more listening practice so you may want to increase the emphasis on listening. Students who are more proficient do not need as much listening and speaking practice; they can do more reading and writing activities.

c) kinds of activities suggested for listening, speaking, reading, and writing. Your students' ages, interests, abilities, needs, and language proficiency influence the kinds of activities you choose for them. Students with limited proficiency require more controlled Language Practice activities. Students who are more proficient can handle more open-ended activities. Your preferred teaching style and the materials and equipment available to you also affect your planning. You may want to change some of the activities to make them more suitable for your students. You may have to change others because you do not have the necessary resources.

d) sequence of activities suggested. Each lesson contains all three phases of the Language Development Framework: Concept Development/Language Exposure, Language Practice, and Application. It is important to include all three phases in your teaching. However, you may want to alter the sequence in which you do the activities within each phase. For example, in the Language Practice phase listening and speaking activities always precede reading and writing activities. Usually it is important to develop aural/oral skills before introducing/developing literacy skills. However, if you have older students who are more proficient in reading and writing you may have to combine those activities with listening and speaking to keep students interested and involved. This is not as likely for primary students; they require simple physical actions to help focus their attention and energy during listening and speaking activities.

e) content used to teach the concept in each lesson. These units have been developed for use throughout the N.W.T. in various cultural and linguistic situations. It is difficult, therefore, to be as culturally specific in the lessons as desirable. As you plan your lessons, you must be as sensitive as possible to the cultural values, experiences, and lifestyles of your students. Please make the lessons as relevant to your community and your students as possible. If you think anything might be offensive to parents or students in your community please omit it or substitute more appropriate content. If in doubt, ask! LEA members, classroom assistants, and parents can provide suitable alternatives. If you are teaching any of the lessons in an aboriginal language, you probably will need to change much of the specific content in those lessons.

f) language in which you teach the lesson. If you teach in a classroom in which an aboriginal language is the language of instruction and English is taught as a second language you will want to teach some of the lessons in each language. For students who are just learning to speak English, the language in some of the lessons is too difficult. Teach those lessons in the aboriginal language. In such situations, consider teaching the lessons as follows:

ABORIGINAL LANGUAGE
(during Science)

What is a Fish?
The Outside of a Fish
Fish Habitats
Life Cycle
We Eat Fish

ENGLISH
(during ESL)

Fish Populations
The Fish With the Deep Sea Smile
Jacky the Jackfish/ Charlie the Char
Let's Go Fishing
The Big, Big Fish

If you teach in a classroom in which English is the language of instruction, you will teach all of the lessons in English. In such situations, you might teach some lessons during your Science and Social Studies periods and others during your Language Arts periods. If your students are not very proficient in English you may want to omit some lessons altogether. For example:

Science

Fish Populations
What is a Fish?
The Outside of a Fish
What's Inside the Fish
Fish Habitats
Life Cycle of Fish

Social Studies

We Eat Fish

Language Arts

The Fish With the Deep Sea Smile
Jacky the Jackfish/ Charlie the Char
Let's Go Fishing
The Big, Big Fish

How do I group students?

These lessons have been designed so that you can teach one lesson to the whole class. You can do Concept Development activities with everyone in most instances. Then you can group students for Language Practice activities according to their needs and abilities. Students who require listening and speaking practice can work with the teacher, a classroom assistant, a tape recorder, or a language master while other students do related reading and writing activities. In this way you can work with the whole class on the same lesson, but students can perform at their own individual skill levels.

Sometimes you may want to group students and teach each group a different lesson. You could organize these groups in two ways:

1) include students with different levels of proficiency in each group. The students who are more proficient serve as models for less proficient students. Teach each group a lesson from a different topic,

   e.g., group A: Lesson: Fish Populations
   group B: Lesson: The Outside of a Fish

   and have students share their work with each other.

2) include students with similar proficiency levels in each group. Teach each group a lesson using material at its proficiency level:

   e.g., group A: Lesson: The Big, Big Fish (vocabulary)
   group B: Lesson: The Big, Big Fish (vocabulary & sentence patterns)
   group C: Lesson: Let's Go Fishing

What kind of preparation do I need to do before teaching a lesson?

First of all, you should read over the lesson so that you are familiar with it and with the materials you require to teach the lesson.

Secondly, you should make sure you have all your materials ready, even if it means delaying the introduction of a unit or lesson for several days. This includes whatever resources you require for the Concept Development activities, as well as Language Practice materials: vocabulary cards, pictures, sentence strips, etc.

Initially it may seem as if there is a lot of preparation for each lesson, but one lesson may take several days to teach and most lessons use the same materials over and over again in different ways. Students in small groups use many of the materials from Concept Development activities during Language Practice. If you work in a school where more than one teacher is using the units, perhaps you can share the preparation work required. Older students often enjoy making things like sentence strips after school as well. Once you have made the materials for one lesson, be sure to save them for another teacher or another year! Plastic envelopes have been provided to help you keep all the materials for one unit together.

Many illustrations that you need for the lessons have been included. **Please note however, that the illustrations in the accompanying envelope are Masters.** Please use them only to make your own copies. (You may have to adjust the size of some to make stencils or other resource materials.) When you are finished with the unit, please sequence the Masters and return them to the envelope so that other teachers will be able to find all the materials easily.

How do I schedule a lesson on my timetable?

Because the lessons emphasize language related to different subject areas, you may want to teach them during various subject periods. This means you may be working on two or three lessons at the same time, each during a different subject. Since the lessons all focus on the same theme, language and concepts emphasized during one period will reinforce those learned during another. It also means that you would be combining the normal times allocated each week for Science and Social Studies to teach this Science unit for three weeks or a month. You would then switch to a Social Studies unit for several weeks using both time periods.

As you plan, keep in mind that one lesson is not necessarily equivalent to one day's work. You will require several days to cover most lessons. You need this amount of time to make certain students internalize new concepts and language items. The chart below shows how you might teach the lesson "Fish Populations" during your Science period over a week.

Note that the Concept Development activities are spread over several days. This helps reinforce both concepts and language and gives students who miss one day's lesson other opportunities to be exposed to the material. Note also that listening and speaking activities precede reading and writing so that students are very familiar with the language orally/aurally before they work with it in print.

Key

(L) = Listening activity
(S) = Speaking activity
(R) = Reading activity
(W) = Writing activity

LESSON: FISH POPULATIONS

	Monday	Tuesday	Wednesday	Thursday	Friday
Concept Development	#1a #1b #1c	#2	#3a #3b		
Language Practice		#1 L #2 L	#3 L/S #4 S	#5 L/S #6 S #7 S/R	#8 S/R #9 R/W
Application	#1 →	#2	#3 →	#4	#5a #5b

* Application activity #1 could be done in a learning centre.
Application activity #3 could be done as an Art project.
Application activity #4 could be ongoing throughout the unit.

How do I evaluate student progress in this unit?

Initial Assessment

The initial assessment activity which you do with the students before any of the lessons will help you determine which concepts and language students already know and which they need to learn.

Ongoing Assessment

It is important to continue assessing students' success in mastering language items, skills and concepts throughout the unit. Each phase of the framework provides opportunities for assessment. During the Concept Development/Language Exposure activities you can informally assess students' understanding of new concepts through observation. Watch to see which students have difficulty matching new language items with the appropriate objects or meanings. It is important to ensure that all students understand new vocabulary and sentence patterns before starting Language Practice activities.

The nature of the Language Practice activities allows you to assess individual student performance of listening, speaking, reading, and writing skills. You can decide which activity to do next based on student performance in the previous activity. Those students who have difficulty with aural/oral activities require extensive practice before doing reading and writing.

The Application activities have been designed to give you an opportunity to determine how much of the language for that lesson students have learned. You can also determine whether students understand the language and concepts.

In addition to observing students during lesson activities, sometime during the course of the unit each student should have a personal conference with you to review work from various lessons. The one-to-one nature of this meeting allows you to determine more effectively:

1. specific weaknesses and strengths in listening, speaking, reading, writing skills,
2. comprehension of and proficiency using new language items,
3. topics and areas within a topic of particular interest to the student,
4. individual progress with the development of scientific process skills (thinking skills),
5. comprehension of science concepts included in the unit.

For the student this meeting serves as an important opportunity to articulate thoughts and feelings about the topic, share work with an interested adult, and identify future projects and directions. You can use the conference to take an in-depth look at one piece of independent reading/writing, to teach skill lessons needed to support and encourage student efforts, and to determine appropriate activities for future lessons.

Final Assessment

The culminating activities provide further informal assessment opportunities. During these activities students use all the concepts, skills and language they have learned throughout the unit. In addition, you may want to use your own assessment techniques or instruments to determine what students have learned. There are examples of simple evaluation activities at the end of the unit.

What kind of records should I keep for this unit?

You will want to keep records for yourself of individual student's progress and mastery of skills, concepts and language. These records can be a combination of anecdotal notes based on observations, check lists, formal or informal tests, taped samples of students' speech and reading, and samples of written work.

Students should also be responsible for keeping records of what they have accomplished. They can keep lists (poems they have learned, stories they have read, books they have written), journals, and their own samples of speech, reading and writing.

Finally, it is also important to keep a list for the next teacher of which topics you have taught and which concepts have been covered in those topics. Hopefully this will prevent those groans of "We did that last year," or even worse "We've done that every year since grade one!"

You will find more detailed information on evaluation and record keeping forms in the booklet Evaluation Guidelines for the Language Development/Science Units.

INTRODUCTION TO THE LANGUAGE DEVELOPMENT APPROACH

This unit consists of lessons which illustrate how to implement the Language Development Approach in the classroom. In order to use these lessons most effectively, it is important to be familiar with and understand:

a) the principles which form the basis of the approach, and
b) the methodological framework which provides the structure for the lessons and applies the principles to teaching practice.

The following is a brief explanation of the principles and the framework. For a more in-depth discussion of both, refer to the appropriate sections in the Language Development ESL/ESD guide.

PRINCIPLES

The Language Development Approach draws on elements of many approaches to teaching second languages and English language arts and integrates these to form a broad set of principles regarding language teaching. These principles include:

1. **Students need to have their experiences, skills, knowledge, and particularly, the language they bring to school identified and used as the basis for the school language program.** The program should begin with and build on these strengths. Where children are dominant in a language other than English, they should be taught in that language. In many communities in the N.W.T., that means that the language of instruction should be Inuktitut or one of the Dene languages. Such students should gradually learn English as a second language. In instances where students speak a dialect of English upon school entry, the school's role is to respect and make use of the language the students bring, and help them learn the English used in other communication situations and which is necessary for success with the curriculum. The aim of language instruction, where applicable, and where possible, is to create bilingual students.

2. **Students need to learn to articulate for themselves and to communicate their thoughts, feelings, needs, opinions, and intentions for a variety of purposes in many different communication contexts. They need to be able to understand, learn from and respond to the communication of others.** This involves being able to:

    a) express and inquire about personal needs, desires, feelings;
    b) socialize;
    c) direct;
    *d) express and find out intellectual attitudes;
    *e) impart and seek factual information on past and present experiences;
    *f) reason logically;
    *g) predict;
    *h) project;
    *i) imagine.

    * Success in school depends largely upon the students' abilities to use language in these ways.

3. **ESL/ESD students need to spend more time learning to speak English than they do learning about English.** Until students have an extensive language repertoire, and can use language for a variety of purposes and in many different situations, they are not ready to analyze language. When students have developed an intuitive grasp of how English works, they can begin to study language concepts and how to apply them.

4. **Students need to learn language, but they also use language to learn.** Therefore, language should be taught across the curriculum. Whether students are learning a subject in their first language or in a second language, the development of each student's language skills is essential to achievement in the subject.

5. **Students need to learn language that is meaningful.** It is easier to accomplish this when teaching language in a context. Therefore, all teachers, in all subject areas, must attend to concept development. Without adequate concept development, the language students learn is either vague or devoid of meaning.

6. **Students need to learn to develop their thinking skills and to engage in more abstract levels of thought as they mature.** They must learn the language that

allows them to express their thinking about concepts. Initially, they need to learn concrete vocabulary and functional sentence patterns as they learn to recall, match, sequence, classify, etc., during activities. Eventually they need to learn more abstract terms and more complex sentence patterns as they grow in their ability to think more abstractly: generalizing, analyzing, imagining, predicting, and evaluating.

7. **Students need to participate in language activities that integrate the language strands of listening, speaking, reading, and writing.** When these strands are taught in isolation from each other in the guise of subjects such as spelling, phonics, grammar, reading, etc., student learning becomes fragmented. Students have difficulty understanding the relationships among listening, speaking, reading, and writing and lose the benefit of one or more strands preparing for and/or reinforcing growth in anothe· e.g., discussion and brainstorming which involve listening and speaking prepare students for writing. First and second language programs should therefore integrate listening, speaking, reading, and writing skills. Specific skills taught will vary with the proficiency level of the students. In the initial stages reading and writing activities should use only language which students have internalized already through aural/oral work. Strong oral proficiency is a prerequisite to learning to read.

   a) Successful readers rely on three language cue systems:

      - grapho-phonemic
      - semantic-associational
      - syntactic

      The ability to use the latter two systems is a function of oral language proficiency. The greater the oral proficiency or degree of internalized language of the students in either their first or second language, the more able they are to use the latter two systems. Reading instruction should not emphasize the use of the grapho-phonemic system to the exclusion of the semantic associational and syntactic systems.

   b) Successful writers also rely on three cue systems. They must possess a meaning base on which to draw, a storehouse of vocabulary representing the meaning base (semantic-associational), and an intuitive sense of how the English linguistic system works (syntactic). Mechanical skills (grapho-phonemic) are just the tools which enable students to communicate knowledge more effectively.

8. **Students need to learn "real" language and how to use it in the natural situations in which it is required.** The vocabulary items and sentence patterns used in lessons should be as similar as possible to the everyday language people actually use. Students require opportunities to practice the language by interacting with others. They will not learn to use language effectively solely through individual paper and pencil exercises.

Program content, classroom organization and teaching techniques used to develop concepts and language and skills should:

a) reflect all of the above, and
b) vary according to:

- the language proficiency of the students in the first and second language,
- cultural background (experiences, interests, and cognitive abilities),
- age/grade levels,
- type of topic,
- learning style of students,
- materials and equipment available,
- teaching style of teacher.

FRAMEWORK

The Language Development Approach uses the following framework to structure lessons involving language learning and conceptual development for all subject areas or for any topics of personal or cultural relevance and interest. The framework consists of three phases:

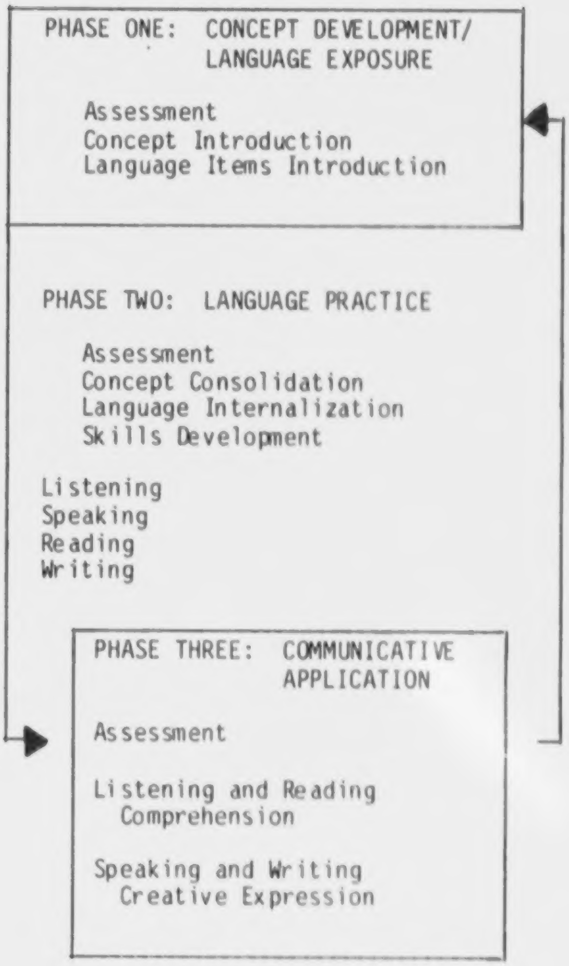
Phase One:	Concept Development/Language Exposure
Phase Two:	Language Practice
Phase Three:	Communicative Application

LANGUAGE DEVELOPMENT FRAMEWORK

(Based on the work of Jim MacDiarmid
Adapted by B. Pugh and C. McGregor)

INTELLECTUAL SKILLS

- Perceiving
- Retrieving
- Recalling
- Matching
- Sequencing
- Classifying
- Comparing/Contrasting
- Generalizing
- Inferring
- Predicting
- Interpreting
- Hypothesizing
- Imagining
- Applying
- Analyzing
- Synthesizing
- Evaluating



PHASE ONE: CONCEPT DEVELOPMENT/
LANGUAGE EXPOSURE

- Assessment
- Concept Introduction
- Language Items Introduction

PHASE TWO: LANGUAGE PRACTICE

- Assessment
- Concept Consolidation
- Language Internalization
- Skills Development

Listening
Speaking
Reading
Writing

PHASE THREE: COMMUNICATIVE
APPLICATION

Assessment

Listening and Reading
Comprehension

Speaking and Writing
Creative Expression

Phase One: Concept Development/Language Exposure

At the beginning of this phase, it is important to assess what conceptual and linguistic knowledge students already possess for a topic. This assessment establishes the appropriate starting point for instruction and helps determine which concepts, experiences, and language items to emphasize.

During this phase, students participate in meaningful activities or experiences through which they learn new concepts related to the topic of study. As much as possible, these activities should involve direct, firsthand, active learning with concrete materials. Where necessary, e.g., in a unit on space, indirect or analogous experiences (films, filmstrips) allow students to move beyond the confines of the immediate classroom to explore concepts associated with other times and places. These activities and experiences help students build bridges between what they already know and new concepts.

While they carry out the concept development activities, students hear and use the new language items that express the concepts. They learn to associate new vocabulary with the relevant objects or actions and to express the relationships among concepts with appropriate sentence patterns. It is essential that students learn the meaning of all new language items during this part of the lesson.

You may choose to use the students' first language during this phase when students have little or no English. You can conduct the assessment tasks in their first language to determine the extent of their conceptual knowledge. If the concepts are familiar, concentrate in ESL classes on teaching the related English language items. If the concepts are new, teach them to students in their first language and then introduce English language items. In classrooms where English is the language of instruction, have the Classroom Assistant explain difficult concepts in the students' first language to be sure they understand them.

Phase Two: Language Practice

In Phase Two, students use the new language items introduced in Phase One in a variety of activities that develop listening, speaking, reading, and writing skills. Through intensive practice of items in a variety of ways, students come to "own" the new language, i.e., commit it to memory so that it becomes part of their permanent storehouse of language items. These activities also continue to strengthen the bond developed in Phase One between the new concepts and the language items that represent those concepts. While the whole class may participate in most of the Phase One activities, it is important to group students for language practice according to their language skills and needs. For students who are not proficient in English, use only language items that they are comfortable with aurally/orally in reading and writing activities.

Phase Three: Communicative Application

The final phase of the lesson sequence provides opportunities for students to use their acquired knowledge and language to communicate in a variety of situations. Students show they have understood the new concepts and can use the new language items as they interact with others. These activities involve students in listening, speaking, reading, and writing to solve problems, bridge an information gap, share information, complete a task, develop an arts and crafts project, share a finished product and explore related concepts and language. While carrying out these activities, the teacher can work individually with students to assess the extent to which they have mastered the concepts and language from the lesson.

In addition to the communicative application activities for each lesson, there are culminating activities at the end of each unit which provide opportunities for students to use all the concepts and language they have learned throughout the unit. During these activities the teacher can meet with students to review their work and what they have learned during the unit.

Intellectual Skills

An essential component of the framework is the development of intellectual skills. Learning new concepts and language involves thinking skills. On the other hand, the ability to think abstractly involves conceptual and linguistic knowledge.

Students who lack the prerequisite basic experiential and linguistic knowledge for a topic cannot engage in activities that require them to apply or solve problems using that knowledge. In moving towards abstract levels of thinking students must:

- acquire simple and concrete concepts and the corresponding labels,
- see patterns and relationships among concepts and form progressively larger and more inclusive conceptual networks in the form of principles and generalizations,
- apply the principles and generalizations to new situations, and
- analyze, synthesize, and evaluate old and new knowledge to solve problems.

In the Concept Development/Language Exposure phase, assessment activities establish whether or not students have basic building block concepts and language to engage in more abstract thinking about a topic. Subsequent activities fill gaps and/or extend the students' background. The structured nature of Language Practice activities demands less high level intellectual activity. Answers are more convergent in nature; the information readily provided or available. However, Communicative Application activities require divergent thinking. Students draw on what they already have learned during the previous two phases to bridge an information gap or solve a problem.

USING THE FRAMEWORK

The Language Development Framework:

- helps students acquire a conceptual background about a topic
- helps students acquire language to express their knowledge about that topic
- provides opportunities for students to use their knowledge and related language in a variety of situations and
- provides opportunities for students to engage in higher levels of thinking.

The framework forms the basis for the following lessons. Keep in mind that the techniques and activities you use with students depend upon many factors:

- cultural background of students
- learning style of students
- age level of students
- proficiency in English
- type of topic
- materials and equipment available, and
- preferred teaching style of teacher.

RESOURCES: BACKGROUND INFORMATION ON FISH

GLOSSARY

Anadromous:	Ascending rivers from the sea to spawn.
Barbel:	A slender flexible projection near the mouth.
Caudal fin:	The tail fin.
Caudal Peduncle:	The "wristlike" region of the body behind the anal fin and ahead of the caudal fin.
Dorsal fin:	The fin or fins on the back that bear spines or ray.
Tubercle:	A projection or lump, usually hard.

SALTWATER FISH

LUMPFISH

Description: Pelvic fins form a round sucking disc under the body used to attach the fish to rocks on the bottom; stout body covered with warty tubercles and cone-shaped projections.

Length to 60cm (Although generally smaller.)
Weight to 6kg

N.W.T. Distribution: Hudson Bay and Ungava Bay.

TURBOT (GREENLAND HALIBUT)

Description: Large flatfish; both eyes located on right side; slightly concave caudal fin. Yellowish or grayish brown, with lighter colouring on the blind side.

Length to 1m (39 in.)
Weight may exceed 10kg (22 lb.)

N.W.T. Distribution: Found in the north Atlantic off the coast of Baffin Island and in Ungava Bay.

Food: Shrimp, squid, other fish.

Life Cycle: Saltwater. Spawning takes place in the early spring at depths of 650 to 1,000 metres. The eggs drift for several weeks, later rising as larvae to the surface waters. The larva initially swims upright but, gradually as it grows, one eye migrates across the top of the larva's skull and positions itself close to the eye on the side. The eyeless side then flattens while the other side grows slightly rounded. At the end of the transformation, the fish then swims on its flat, eyeless side.

ARCTIC COD

Description: Elongated body; deeply forked caudal fin; projecting lower jaw; small barbel under lower jaw; very small scales. Back and sides are brownish, spotted with many black dots. It is silvery below. Fins are very dark with a narrow pale edge.

Length to 38cm.

N.W.T. Distribution: Circumpolar; found in the Beaufort sea, Arctic Archipelago, Hudson Bay and Baffin Bay. They are found close to shore among ice floes and also offshore in depths greater than 900m. Found further north than any other fish species.

Food: Plankton, eggs and larvae of small crustaceans, smaller members of their species. They rely mainly on organisms making up the drifting plankton in the upper layers of the water column.

Life Cycle: Saltwater. Reach sexual maturity at three to four years of age. Spawning occurs in late autumn and water under the Arctic ice cover. 9,000 to 21,000 eggs are released into the sea and fertilized by milt from the male. Average life span is six years.

ANADROMOUS FISH

ARCTIC LAMPREY

Description: Primitive fish; eel-like body with no scales and a leathery skin; skeleton is entirely cartilagenous and contains no bone; the mouth is a sucking disk bearing horny teeth. There are two forms of this species; a large parasitic anadromous form and a dwarf freshwater form which might be parasitic.

Length to 411m (16.2 in.) in North America

N.W.T. Distribution: Mackenzie Delta area; extend up the Mackenzie River to Great Slave and Artillery lakes, and to Fort Smith on the Slave River.

Food: Adults of the parasitic form attach themselves to the host species by the oral sucker, rasp away the skin and scales with their horny teeth and suck the body blood and fluids. Lamprey are known to parasitize lake trout, whitefish, flounder, ciscoes, burbot, and many other species.

Life Cycle: Spawning takes place in the spring in river systems. Both males and females take part in nest building. Eggs hatch into larvae, called ammocoetes and remain buried in the mud for one or possibly two years. Upon metamorphosis, the young adults migrate downstream to the sea or freshwater lakes to feed.

ARCTIC CISCO

Description: Close relative to the whitefish, large scales, small weak teeth, trout-like body. Anadromous adults are brown to light green above and bright silver below. Dusky dorsal and caudal fins.

Length: Usually less than 510mm (20 in.)

N.W.T. Distribution: Mackenzie Delta areas (ascends the Mackenzie to Camsell Bend); Bathurst Inlet and Cambridge Bay areas.

Food: Feed mainly on crustaceans and small fish.

Life Cycle: Spawning occurs in late summer and early fall over gravel in fast water. No nest is built and the eggs scatter over the substrate, left to fend for themselves. On the Mackenzie River, a distinct downstream migration occurs after spawning (between freeze-up and Christmas).

CHUM SALMON (DOG SALMON)

Description: Large mouth with well developed teeth. Does not have distinct black spots on the back and fins as do other salmon. During spawning males are dark above, dirty red on the sides, and dusky below. There are distinct greenish bars on the sides. Female colouring is similar during spawning, but less pronounced.

Length to 100cm (40 in.)
Weight to 15kg (33 lb.)

N.W.T. Distribution: Ascends the Mackenzie River to the rapids below Fort Smith on the Slave River, to the Liard River, and to Great Bear Lake.

Food: At sea, feed mainly on crustaceans, squids and small fish.

Life Cycle: Anadromous. Adults spawn only once in their lifetime. Spawning occurs in the 4th or 5th year of life. Adults return to the streams of their birth. Adults start to ascend the rivers in the early fall. Spawning usually occurs in riffle areas over a gravel bottom. The female digs a nest (redd), sheds the eggs and covers the nest. A female may dig several nests (redds) and spawn with several males. After spawning, the adults die. The young remain in the gravel for several weeks after hatching, then migrate downstream. They school in estuarine areas and remain there for several months before moving out to sea.

ARCTIC CHAR

Description: Body coloration is highly variable depending on location, time of year, and degree of sexual development. In general, the back is dark with a blue or green cast; the sides are silvery. Sides and back have many pink or red spots. Spawning adults, especially males, exhibit a brilliant orange or red coloration on the sides and fins.

N.W.T. Distribution: Abundant in coastal regions of the N.W.T. Occur as anadromous (ascend rivers from the sea to spawn) and landlocked populations.

Food: Small fish and bottom organisms.

Life Cycle: Char overwinter in freshwater lakes and rivers. In the spring they migrate downstream to the ocean to feed, where food is abundant. In the fall they return to freshwater, where they eat very little and live off fat accumulated in the summer.

Sea-run char mature around their tenth year and females spawn every second or third year. Often they do not migrate to sea during their reproductive years.

Young char remain in freshwater until the age of four or so and then migrate in the spring with the adult char to feed in the ocean.

FRESHWATER FISH

LAKE CHUB

Description: A large minnow with a distinct tiny barbel at the corner of the mouth; slender body. Dark brown or green above and silvery below, with an indistinct dark midlateral band on the back half of the body.

Length to 152mm (6 in.)

N.W.T Distribution: Throughout the Mackenzie River system north to the delta; extending into the Barren Grounds in Anderson River and in tributaries to Chesterfield Inlet, Thelon, Dubawnt and Kazan rivers, and Nueltin Lake.

Food: Insects, zooplankton, algae, some small fish.

Life Cycle: Freshwater. Spawning occurs in late summer in shallow water over rocky or gravely bottoms in rivers and small streams. Do not construct nests and do not tend eggs.

SLIMY SCULPIN

Description: A small bottom dwelling fish; large head with gill covers armed with sharp spines, robust body tapering to a narrow caudal peduncle. Both a spiny and soft dorsal fin; a single spine in each pelvic fin. Mottled light brown to dark grey on back and sides, and whitish (occasionally orange) below.

Length to 120mm (4.7 in.)

N.W.T. Distribution: Most Arctic Ocean drainages east to Ungava Bay. Less typical of lakes than of cool running water with rocky or sandy bottom.

Food: Primarily aquatic insects, some crustaceans, small fish, and aquatic vegetation.

Life Cycle: Males build a nest and aggressively defend it against other males. The loser in a fight is often killed. Males court many females and often mate with two or three in the same nest. The female deposits an egg mass on the roof of the nest and leaves the nest. The male guards the eggs until hatching. After a week the young disperse to take up a solitary life.

LONGNOSE SUCKER

Description: Bottom dwelling fish with a protrusive mouth located on the underside of the head; no teeth in the jaws; fleshy lips; long snout. Back and sides are dark grey to black; underparts are white. Breeding males have a broad, midlateral band-a vivid rose or wine colour extending from snout to tail.

Length to 635mm (25 in.)
Weight to 3.2kg (7 lb.)

N.W.T. Distribution: Throughout almost every mainland drainage system.

Food: Suckers swim slowly along the bottom sucking up debris including small crustaceans, insect larvæ, and molluscs.

Life Cycle: Freshwater. Spawning begins at spring ice break-up. Fish move into shallow gravel-bottom streamlands. The female spawns many times in an hour with the same or different males. No nest is built. The young disperse shortly after hatching.

BURBOT (LOCHE, LINGCOD, MARIAH, DOGFISH)

Description: The only cod adapted to a purely freshwater existence. Elongated body tapering to a point. Whiskerlike barbel on the tip of the chin. Back and sides are olive green to dark brown with irregular pale blotches; the underparts are usually a pale yellow-white, but occasionally speckled.

Length to 122cm (4 ft.)
Weight to 34kg (75 lb.)

N.W.T Distribution: Most mainland drainages, but not on Arctic islands. Often found in deep water; also occurs in large rivers, small streams, elevated lakes, and low lying ponds.

Food: Carnivorous; feeds on other fish.

Life Cycle: One of the few Canadian freshwater fish that spawn in winter, under the ice. Breeding occurs at night in one to four feet of water, when a number of males and females come together and form a globular mass of squirming bodies. One female may lay over a million eggs; no care is given to the young.

INCONNU (CONY, SHEEFISH)

Description: Largest member of the whitefish family; long silvery fish with large, wide mouth and a projecting jaw. Large scales; dark green to light brown above and silver below. Dorsal part of head and tip of lower jaw are usually dusky.

Length to 150cm (59.2 in.)
Weight to 28.5kg (63 lb.)

N.W.T. Distribution: Arctic Ocean drainages. Mackenzie River, Liard River, and Slave River systems. Most abundant in large, muddy rivers and associated lakes.

Food: Feed mainly on small fish.

Life Cycle: Anadromous in coastal areas, ascending freshwater streams from the sea to spawn. Freshwater residents migrate up tributaries in the late summer to spawn and return to lakes in large downstream runs. Eggs are scattered over riffle areas.

ARCTIC GRAYLING (BLUEFISH)

Description: Greatly enlarged dorsal fin. Small mouth with fine teeth. Dark purple or blue back; sides are grey with scattered black spots. Dorsal fin is dark with rows of orange spots and some green spots, and is edged with red or orange.

Length to 61cm (24 in.)
Weight to 2.3kg (5 lb.)

N.W.T. Distribution: Occurs throughout N.W.T. excluding Arctic islands in clear water (lakes and streams). Generally found in schools.

Food: Surface feeders in summer as aerial insects are most important food. In the winter they become bottom and mid-water feeders.

Life Cycle: Spawning occurs in clear water tributaries immediately after break-up. Males court females with displays of their dorsal fin. The young have been described as "two eyeballs on a thread." Young fry grow rapidly in the summer and disperse to deeper overwintering waters in the fall.

LAKE TROUT (LAKE CHAR)

Description: Deeply forked caudal fin (tail). Irregular white or yellowish spots on back and sides. Back is dark green to grey or brown. Underside pale off white or yellow.

Length to 122cm (48 in.)
Weight to 46.4kg (102 lb.)

N.W.T. Distribution: Occurs throughout N.W.T. in cold lakes and large clear rivers.

Food: Other fish, bottom organisms, plankton, insects.

Life Cycle: Freshwater. Spawn in late summer and early autumn, over gravel areas along the lake shore. Do not construct nests although the spawning area is cleared by brushing the rocks with tail or body fins. Eggs and sperm are extruded over the bottom and no care is given to the young.

Note: Lake "trout" is a misnomer. The fish is a char and not a trout.

GREAT NORTHERN PIKE (JACKFISH)

Description:	Long flattened snout, large mouth with many large sharp teeth, long narrow body. Dorsal fin placed well back on body. Back and sides are dark green to dark brown; irregular light yellow spots roughly arranged in vertical rows on the sides. Underside is yellow-white. Length to over 122cm (4 ft.) Weight may exceed 18kg (40 lb.)
N.W.T. Distribution:	Most Arctic Ocean drainages. Not found in northern Keewatin or on the arctic islands. Found in shallow lakes and bays and quiet rivers.
Food:	The wolf of freshwaters. It lurks on the edge of a weed bed and attacks creatures wary enough to enter its domain. They will eat virtually any living vertebrate available to them within the size range they can engulf.
Life Cycle:	Freshwater. Spawn in spring after ice breakup, usually in shallow weedy areas. Scatter eggs over the bottom or on submerged plants. At hatching, the young often attach themselves to vegetation by means of an adhesive gland and feed on the stored yolk (6-10 days). The young develop rapidly, feeding on plankton and insects. By the time they are 5cm long their diet consists almost entirely of other fish.

LAKE WHITEFISH (CROOKEDBACKS, HUMPBACK WHITEFISH)

Description:	Body elongated; somewhat compressed laterally in older fish. Tip of snout projects beyond tip of lower jaw. Large fish may develop a distinct hump behind the head. Back is dark brownish or greenish; belly is silver or yellowish. Overall appearance may be silvery. Length to 73cm (28.8 in.) Weight to 10kg (22 lb.)
N.W.T. Distribution:	Throughout mainland drainages and on Victoria Island. Occur typically in lakes, although may be found in larger rivers and estuaries.
Food:	Generally bottom feeders; eat molluscs, larval insects, snails, clams, shrimp, fish eggs.
Life Cycle:	Spawning occurs from late summer to late fall over rocky reefs in lakes or in the shallows of rivers. In the extreme north, adults breed every second or third year. Deposit the eggs randomly over the spawning grounds and provide no parental care.

NINESPINE STICKLEBACK

Description: Small fish with seven to twelve closely set spines before the soft dorsal fin. Olive green to light brown on the back, sides are irregularly barred or mottled with the same colour. Underparts are yellowish-white. Breeding males are black under the chin and along the belly.

Length up to 9cm

N.W.T. Distribution: Throughout much of the Mackenzie River system; most of the rivers and lakes of the central N.W.T.; throughout most of the arctic Archipelago and the coastal regions of Hudson Bay; Baffin Island. Typically found in shallow bays, slow streams and tundra ponds. Some populations may winter in the sea and spend summers in the immediate vicinity of stream mouths.

Food: Feeds on bottom organisms (insect larvae, small crustaceans, molluscs). At some times of the year it may feed on winged insects and the eggs of other sticklebacks.

Life Cycle: Sticklebacks are territorial. Male builds a nest of algae and plant debris; normally the nest is tunnel shaped and built in dense vegetation. The male tends the eggs throughout development. When they hatch and the larvae are able to swim, he may transfer them to a nursery area. This area is loosely constructed of nest-building material and is situated directly above the nest.

ROUND WHITEFISH

Description: Body cigar shaped and rounded in cross-section. Small mouth; snout projects beyond lower jaw. Dark brown to olive green above and silvery below.

Length to 50.8cm (20 in.)
Weight to 2kg (5 lb.)

N.W.T. Distribution: Arctic Ocean drainages, excluding Arctic islands. Most abundant in shallow areas of lakes and clear streams.

Food: Feeds in shallows on insects, snails, fish eggs.

Life Cycle: Spawning occurs in autumn. Lay eggs over gravel beds of rivers and in shore areas of lakes. The young hatch out as sac fry and in two to three weeks, after the yolk is absorbed, they leave the spawning grounds.

YELLOW WALLEYE (PICKEREL)

Description: Largest member of the perch family; body elongated and robust with two dorsal fins. Large mouth with canine teeth for tearing. Its eyes, which are large and silvery from light reflected by a light-sensitive layer, are said to resemble the eyes of blinded or "wall-eyed" domestic animals. Back is dark green to brown, often with brassy yellow specks; sides are mottled yellowish; underparts are white.

Length to 78cm (30 in.)
Weight to 5kg (11 lb.)

N.W.T. Distribution: Found throughout most of the Mackenzie River basin north to Arctic Red River.

Food: Largely fish eaters. Also eat aquatic insects.

Life Cycle: Spawn in early spring in sandy or rocky shoal areas in lakes, or gravel shallows in rivers. Eggs are deposited and fall into crevices in the substrate. Young fend for themselves. Individuals appear to return to the same spawning ground year after year.

RESOURCES: INCLUDED WITH THIS UNIT

POSTERS:

Atlantic Canada Species
Freshwater Canada Species
Department of Fisheries and Oceans
Government of Canada

PAMPHLETS/BOOKS:

Canadian Fish Products
Department of Fisheries and Oceans
Government of Canada

RESOURCES TO ACCOMPANY LESSONS:

Fish Populations
- illustrations of common fish species

The Outside of a Fish
- puzzle fish
- pocket chart cards of fish parts

The Fish With the Deep Sea Smile
- clothesline illustrations

Jacky the Jackfish/Charlie the Char
- pocket chart illustrations

Let's Go Fishing
- outline figures
- fish illustrations

The Big, Big Fish
- outline figures

We Eat Fish
- illustrations of fish prepared in different ways

RESOURCES: RELATED ENGLISH MATERIALS

Magazines

Refer to back issues of Owl, Chickadee, Ranger Rick, Your Big Back Yard, PIK, etc. for pictures of and information about fish.

There are several magazines aimed at the sports fisherman. These are a good source of photographs and illustrations of fish.

Teachers' Resources

Freshwater Fishes of Canada
W.B. Scott and E.J. Crossman
Fisheries Research Board of Canada, 1973

Fish and Fisheries
Alaska Sea Week Curriculum Series: VI
Belle Mickelson and Nancy Barr
University of Alaska, 1983

Facts on Fish
Fisheries Association of British Columbia
Room 400, 100 W. Pender Street
Vancouver, B.C. V6B 1R8

A Programmed Learning Unit on Fishes
Nancy Davidson
Alaska Multi-Media Education Program
Alaska State Museum
Pouch FM, Juneau, Alaska 99811

Arctic Animals
Jonquil Graves and Ed Hall
Department of Renewable Resources
GNWT, 1985

Underwater World (fact sheets)
- Arctic Cod
- Selected Freshwater Fish
- Turbot (Greenland Halibut)
- Witch Flounder

Available from: Communications Directorate
Department of Fisheries and Oceans
Ottawa, Ontario K1A 0E6

Northern Cookbook
Eleanor A. Ellis
Hurtig Publishers, 1979

Freshwater Fishes of Northwestern Canada and Alaska
J.D. McPhail and C.C. Lindsey
Queen's Printer for Canada, 1970

Films, Filmstrips and Slides

Fish: A First Inquiry
BFA Educational Media, 1972 (Film)

Fish and Their Characteristics (Film)
Coronet Films, 1961

Fish the Last Frontier (Film)
TV Sports Scene

The Fisherman and His Wife (Film)
Weston Woods Studio, 1970

Animals and How They Grow (Filmstrip)
National Geographic Society, 1976

Sharks (Filmstrip/cassette)
National Geographic Society, 1977

Life Cycles (Filmstrips/cassettes)
National Geographic Society, 1974

Available from National Film Board of Canada:

- Hiroko Ikoko (Film)
- The Fish Embryo: From Fertilization to Hatching (Film)
- Fishing at the Stone Weir: Parts I and II (Film)
- Jigging for Lake Trout (Film)
- The Trout That Stole the Rainbow (Film or filmstrip/cassette)
- Trout Stream (Film)
- Tuktu and the Magic Spear (Film)
- Tuktu and the Ten Thousand Fishes (Film)
- Among Fish (Film)
- "Water, Water Everywhere..." (Film)
- Van's Camp (Film)

Children's Books

A First Look at Fish
Millicent Selsam and Joyce Hunt
Walker & Co., 1972

The Life of Fishes
Maurice Burton
Silver Burdett Co., 1978

Fish Fun Book
Patti Carson and Janet Dellosa
Carson-Dellosa Publishing Co., 1984

A Fish Hatches
Joanne Cole
Morrow, William, & Co., Inc., 1978

What is a Fish?
David Eastman
Troll Associates, 1982

Fishes
Wonder-Treasure Books, Inc., 1984

Fish
Fiona Hentri
Watts, Franklin, Inc., 1981

The Fish: The Story of the Stickleback
Margaret Lane
Dial Books for Young Readers, 1982

The Fish Book
Cynthia Overbeck
Lerner Publishers Co., 1978

Donald and The Fish That Walked
Edward R. Ricciuti
Harper & Row, 1974

Fish: An Educational Coloring Book
Spizzirri Publishing Co., 1981

Fishes
Brian Wildsmith
Merrimack Publishers Circle, 1983

Little Black Fish
Samuel Bahrang
Carolrhoda Books, 1971

The Fish
Dick Bruna
Price Stern, 1984

The Carp in the Bathtub
Barbara Cohen
Lothrop, 1972

The Biggest Fish in the Sea
Dahlov Ipcar
Viking, 1972

Funny Fishes (A Methuen Caption Book)
B. Randell & J. McDonald

Nibble Nibble
Margaret Wise Brown
Addison-Wesley Limited, 1959

The Lac La Martre Fish Plant
Armin Wiebe
The Big Big Fish
Gordon Breen
The Lac La Martre Reader Project, 1984

Fishes
Alwyne Wheeler
Usborne Publishing Ltd., 1982

The Magic Fish
Freya Littledale
Scholastic Inc., 1985

Fishy Riddles
Katy Hall and Lisa Eisenberg
Dial Books for Young Readers
E.P. Dutton, Inc., 1983

A Fish Book
Breakthrough to Literacy
Longman Group Ltd., 1970

Fish Are Mammals
Clive Harper
Methuen Educational Ltd., 1972

Down By Jim Long's Stage
Al Pittman
Breakwater Books, 1976

One Wonderful Fine Day for a Sculpin Named Sam
Al Pittman
Breakwater Books

A Fishy Shape Story
A Funny Fish Story
David Wylie
Childrens Press, 1984

Louis the Fish
Arthur Yorinks
Farrar, Straus & Giroux, Inc.

Loudmouth George and the Fishing Trip
Nancy Carolson
Carolrhoda Books, 1983

The Empty Squirrel
Carol Carrick
Greenwillow, 1981

Six Foolish Fishermen
Benjamin Elkin
Scholastic Inc.

Fish for Supper
M.B. Goffstein
Dial Books for Young Readers, 1976

The Little Fish That Got Away
Bernadine Cook
Scholastic Book Services

Grandpa, Grandpa (A Story Box Book)
Joy Cowley and June Melser
Shortland Publications, 1980
(Available as a Big Book)

Tammy and the Gigantic Fish
Catherine D. Gray and James Gray
Harper & Row, 1983

Bobby Bear Goes Fishing
Marilyn O. Helmrath and Janet L. Bartlett
Rainbow Books, 1978

Tobia Catches Trout
Tobias Goes Ice Fishing
Ole Hertze
Carolrhoda Books, 1984

Gone Fishing
Earlene R. Long
Houghton Mifflin Co., 1984

Amy Goes Fishing
Jean Marzollo
Dial Books for Young Readers, 1980

Tink Goes Fishing
Mercer Mayer
Macmillan, 1984

One Fish, Two Fish
Dr. Seuss
Beginner Books, 1960

Fish
Macdonald Starters
Macdonald Educational

Blue Sea
Robert Kalan
Greenwillow, 1979

It All Started with the Big Green Fish
Istvan Kormos
Newbury Books

Fish is Fish
Leo Lionni
Pantheon, 1970

Swimmy
Leo Lionni
Pantheon, 1963

A Patchwork Fish Tale
Stewart Moskowitx
Simon & Schuster, Inc., 1982

Big Fish
Aileen Olson
Lothrop, 1970

A Fish Out of Water
Helen Palmer
Beginner Books, 1961

Finn the Foolish Fish: Trouble with Bubbles
Sherry Paul
Childrens Press, 1981

Ocean Fish School
Bob Reese
Childrens Press, 1983

Bill and the Fish
Dorothy Z. Seymour
Wonder-Treasure Books, Inc.

A Fish & A Frog
Terri Super
Putnam Publishing Group, 1984

I'm a Little Fish
I.M. Tubby
Windmill Books,

A Good Fish Dinner
Barbara Walker
Parents Magazine Press, 1979

A Big Fish Story
A Fishy Alphabet Story
A Fishy Color Story
Joanne Wylie and David Wylie
Childrens Press, 1983

Miscellaneous

Sport Fishing Guide (Northwest Territories 1986)
Dept. of Renewable Resources
GNWT, 1986

World Class Fishing - Just Minutes Away
Travel Arctic, Dept. of Economic Development
GNWT, 1986

RESOURCES: RELATED ABORIGINAL LANGUAGE MATERIALS

Inuktitut Language Arts Program

Grade One: Lesson 21 - Traditional Hunting, Fishing and Travel

Grade Three: Unit 26 - Fishing
Unit 27 - Fish Parts

Slavey Language Materials

Fort Franklin Readers/Workbooks - Miki
Tutsi Series - Book #4 - Tútsi Mį́ dał'į: Tutsi Sets a Net

INITIAL ASSESSMENT ACTIVITIES

The following activities should be done before you teach any of the lessons. They will assist you to determine:

1. what students already know about the concepts of the topic and therefore where instruction should begin;
2. what interests students have in the topic and therefore the direction the unit should take; and
3. what language students already have to discuss the topic and what language they require.

One of the basic principles of the Language Development Approach and of all good teaching is that you should start with the student when planning and carrying out a unit. Before you begin to teach it is important to assess your students' knowledge of and interest in the topic. You should determine what students already know about the topic/concepts you intend to cover. What ideas do students already have? What misconceptions do they have which you must address? What gaps are there in their knowledge which require that you teach certain lessons? What concepts do they know well enough so that you can skip the lessons which teach those concepts? What questions do they have? What relationships do they see between different aspects of the topic?

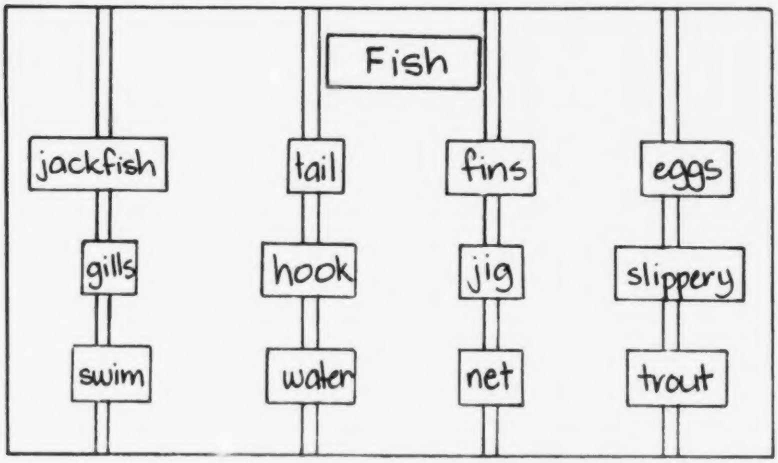
It is also important to identify what experiences students have which relate to the topic/concepts. By identifying these and building upon them in the lessons you can help students relate the new ideas and information to their own lives. It is important to do this because it assists students to internalize new concepts. It helps students make the concepts part of the conceptual framework which they use to understand and describe their world. If they do not have concrete, firsthand experiences to relate to each concept you will have to provide them wherever possible.

Another use for these activities is to help you identify particular interests of individuals, groups of students, or the whole class. You can then include activities in the lessons which involve student interests, thereby increasing motivation for them to participate and learn. You may decide to add, substitute or omit some lessons because of students' interests.

These activities will also help you determine what language students have to discuss the topic. You can find out what vocabulary items students already know and what associations they have for each word. It is important to ascertain the meanings students attach to words; sometimes their interpretations may surprise you! If they do not clearly understand terms or use them incorrectly, it will prevent them from understanding and incorporating the concept into their mental framework.

1. Brainstorming

Look at real fish or pictures of fish. Ask students to tell you what they know about fish. Record their answers on cards and hang them on masking tape strips (sticky surface up) which you fasten to the wall or the chalkboard.



If students have difficulty with this activity you may wish to direct their thinking or prompt ideas by asking more specific questions:

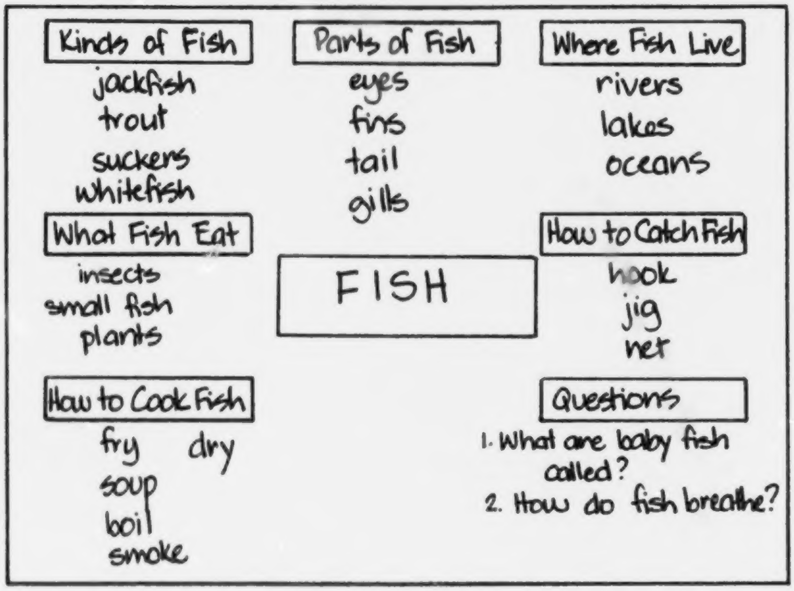
"What kinds of fish are there?
How are all fish alike?
How are they different from each other?
How are they different from land animals?"
Etc.

Encourage students to predict answers to these questions even if they aren't sure of the exact responses. It might be interesting to record their predictions separately and compare them to the actual answers as you study the unit. Students may think of their own questions as well. Keep a list of all the questions the class cannot answer to focus the lessons you teach during the unit.

After you record their responses on the cards, have students chant the words with you. Talk about the words: Which word is the most interesting? the least interesting? the most puzzling? What other word can you think of that means almost the same thing? What comes to your mind when I say __________? What do you think this word means? Etc.

2. Categorizing:

Distribute the word cards from the brainstorming session. Be sure to tell students the words you give them. Give younger students only one card at a time so they will not get confused. Have one student place his/her word card at the top of one of the masking tape strips and tell the word to the class. Ask if there is anyone else who has a word that belongs with the first word. Have another student place his/her word card under the first, read the word and explain why it belongs with the first word. Give a title to these two cards which now form a category. Ask if anyone can start a new category. When students have placed all of the brainstormed words in categories, discuss the titles and change them if necessary. Chant the words in each category with students. Transfer the words to a flowchart to provide a permanent reference.



FISH

Kinds of Fish
- jackfish
- trout
- suckers
- whitefish

Parts of Fish
- eyes
- fins
- tail
- gills

Where Fish Live
- rivers
- lakes
- oceans

What Fish Eat
- insects
- small fish
- plants

How to Catch Fish
- hook
- jig
- net

How to Cook Fish
- fry
- dry
- soup
- boil
- smoke

Questions

1. What are baby fish called?
2. How do fish breathe?

As you teach the unit you may wish to add new information to the chart. You may also identify new questions and, hopefully, the answers. At the end of the unit you can review the chart with students. Keep it as a reference for future use.

SAMPLE QUESTIONS

You can use these questions during the initial assessment activity to determine what experiences, language, and knowledge students have about the topic. You can also use the questions for assessing thinking processes throughout the concept development and application phases of each lesson and during the culminating and evaluation activities.

QUESTIONS FOR ASSESSING EXPERIENCE:

1. Have you been in a situation where _________?
2. What do you know about _________?
3. Have you ever seen _________?
4. Have you ever experienced _________?
5. Have you ever been _________?
6. Have you ever done _________?
7. Has something like this ever happened to you?
8. When was the last time you _________?

QUESTIONS FOR ASSESSING LANGUAGE:

1. What do you think these words mean?
2. Can you give me another word that means _________?
3. What comes to your mind when I say _________?
4. Have you heard of the word(s) _________?
5. What words can you think of when I say the word _________?

QUESTIONS FOR ASSESSING THINKING PROCESSES:

Cognitive Memory (details, information)

1. Who.....?
2. What are the facts?
3. What are the most important details?
4. What is the.....?
5. What do you mean by.....?
6. What is your interpretation of what happened? (What do you think happened?)
7. When?
8. Where?

Convergent/Generalizing (getting the main idea)

1. What are the chief points?
2. Given that information, what is the main idea?
3. What is the single most important idea?
4. State the idea in one sentence.
5. Explain ____________________.

Structuring/Relating (arranging relationships)

1. Categories: Which group does that belong to?
   How would you classify.....?
   What type would you.....?
2. Comparisons: How are they alike? same? similar? identical?
3. Contrast: How is it different? in opposition to? unlike?
4. Cause and Effect: What will happen if? Why?
   What will happen as a result of?

Divergent/Using/Applying

1. What might happen if _________?
2. If you use that idea, what would it mean for _________?
3. Apply that idea to our (this) situation.
4. What would result if _________?
5. If you were given these facts, what would you do to _________?
6. How would it be different if we used this idea?
7. What could the advantages/benefits be if we applied this idea/process?
8. What do you think the (story/paragraph) will be about?

Evaluation/Judging/Valuing

1. How do you feel about this idea?
2. What is your opinion?
3. What is the best _________?
4. Are you satisfied with that answer/plan?
5. Can this statement be made? Why?
6. Out of all the information, what can be used to prove your point?
7. How would you judge?
8. What is your opinion or conclusion about the product/plan/idea?
9. Why did you think it worked/didn't work?
10. What is fact? What is opinion?

Science/Social Studies

1. Set up an aquarium. What types of fish are in it? How many of each type? How do we care for the fish?
2. On worksheets write a list of fish names in a column. Opposite have a column of fish outlines. Students draw a line from fish shape to its correct name.
3. Go fishing and identify the fish caught.

Teacher's Notes

These are possible activity ideas for this topic. They can be used in lessons you make up, as enrichment activities, or as learning centre activities. Most can be done in any language. Activities with an * are actually used in the sample lessons which follow. Spaces have been left for you to record your own activity ideas.

ACTIVITY IDEAS

TOPIC A: POPULATIONS

Math

1. Cut out a number of cardboard fish that differ in shape, colour and size. Students sort into groups according to one characteristic (e.g., colour).

Language Arts

1. Learn local names (English and/or Native Language) for the different fish.
2. Phonics - "f" "sh".
3. Cut out a dozen fishtails. Put one word ending on each tail. Store in a fish-shaped pocket. Students select one tail and write as many words as they can think of with that ending. Examples: -ly -able -tion
4. An instant bulletin board dictionary can be made with a fishnet and large paper fish. Each child illustrates a vocabulary word and puts it into the net. Words are available for reference by the children.
5. Pair off - One student says, "My fish is big." Partner must respond with an opposite statement, i.e., "My fish is small." Other possibilities: long/short, fat/thin, raw/cooked, heavy/light, etc.

Music, Poems, Stories

1. "A-Fishing We Will Go" - have students brainstorm rhyming pairs to use in the song, for example:

   A-fishing we will go,
   A-fishing we will go,
   We'll catch a little loche
   And then we'll name him Josh,
   A-fishing we will go.
2. "Way Down Deep"
3. "A Baby Sardine"
4. "A Sardine Fish is Small and Thin"
5. "Silver Knots"

Art

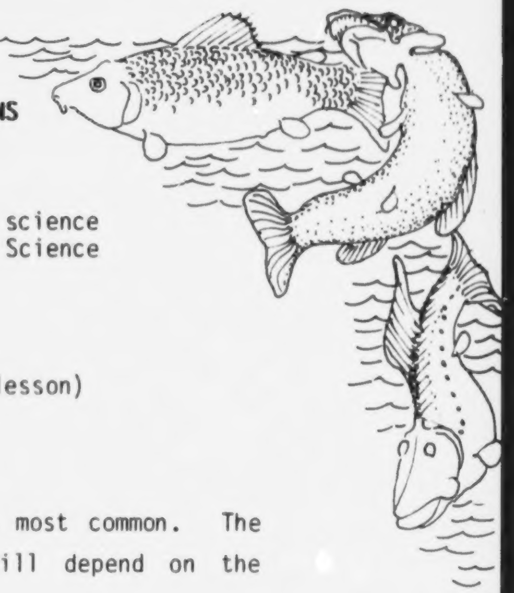
1. Make brightly coloured paper fish. (Look at pictures of tropical fish for ideas.) Cut them out and hang them from a branch to make a mobile.

Physical Education/Movement

1. One student is the fisherman. Four students link hands and are a net. The fisherman takes the net's hand and runs after the rest of the class, who are fish. All the 'fish' wear paper replicas of a local fish. The net tags the fish and then encircles it. The fisherman can only keep the fish he has caught if he can guess what kind it is. Fisherman may ask three questions. E.g.: Has this fish spines? Is this fish big? Has this fish a long fin? To make this easier there might be only two or three different kinds of fish in the game.
2. Students use stencils of fish to trace and then paint or colour in correctly. The stencils should be the average size of the fish when it is caught. Each student should make at least two or three. Sitting in a circle the teacher can name one of the fish. The puppet points to a picture of it. The student who has a picture of that fish holds it up.
3. Hide lots of different fish all over the classroom. Students, in groups of two, go fishing and have to collect, as directed, 2 loche, 5 sticklebacks, 1 trout, 3 inconnu, etc.

Special Activities

1. Concentration/Snap - match two pictures of same kind of fish.
2. Play "Go Fish" with local varieties of fish.
3. Shadow Game - Shine a light behind a sheet and show cut outs of fish. Who can guess which they are?
4. Make paper replicas (actual size if possible) of local species of fish. In a large group or in small ones, arrange a selection of the fish on a tray and let students study for a minute or two. Teacher covers the tray with a cloth and then removes one of the fish. Students guess which fish is gone. They must remember the name!



LESSON: **FISH POPULATIONS**

As this lesson emphasizes language related to science concepts, you may wish to teach it during your Science period.

English Vocabulary (* actually developed in this lesson)

* population/s
* names of local fish populations (Choose the most common. The number of species you choose to include will depend on the abilities of your students.)

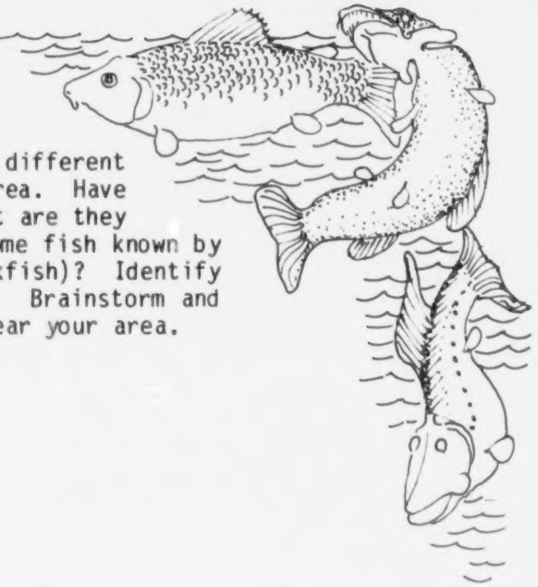
English Sentence Patterns (* actually developed in this lesson)

* What fish populations live near (community) ?
* Populations of __________ live near __________.

Do we catch __________ in (community) ? Yes, we do.
No, we don't.

Special Materials Required

Illustrations of fish



Concept Development/Language Exposure

1. a) Try to obtain actual specimens of the different kinds of fish that are found in your area. Have students name the fish they know. What are they called in the native language? Are some fish known by several names (i.e., northern pike/jackfish)? Identify for students the fish they don't know. Brainstorm and record other types of fish that live near your area.

   b) Compare the types of fish. Look at:

      size
      shape
      shape of head/mouth
      shape of fins/tail
      position of fins
      colour
      size of scales

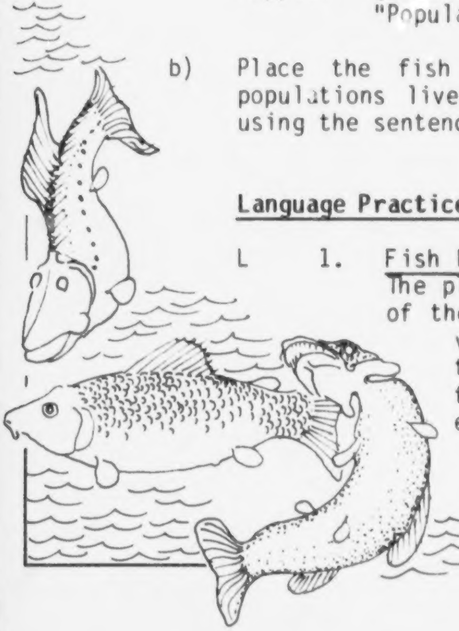
   c) Introduce the term "population." Explain that each type of fish represents a population. Review the various fish names using the sentence pattern, "Populations of (fish type) live near (your community)."

2. Visit the local fisheries (wildlife) office. Collect pamphlets about the different kinds of fish in your area.

3. a) Use an innertube or a paddling pool as a fish pond or lake. Make life-sized paper fish (one of each variety) and attach a paper clip to each. Make a fishing rod with a stick and a length of string. Tie a small magnet to the end of the line. Carry on a conversation with a puppet dressed in clothing appropriate to your community as you "catch" the fish. For example:

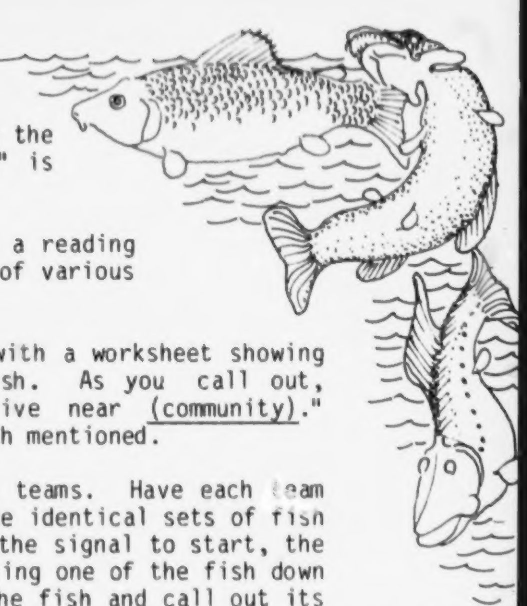
   Teacher: "What fish populations live near __________?"
   Puppet: (Catches a fish and identifies it using the sentence pattern.)
   "Populations of __________ live near __________."

   b) Place the fish cutouts on a bulletin board labelled: What fish populations live near (your community)? Review each species of fish using the sentence pattern.



Language Practice

L 1. Fish Net Scramble: Seat all players except one on chairs. The player (at first the teacher) who is standing gives each of the students a fish picture. (Pictures of the different varieties of fish found locally.) To start the game, the player standing calls out the names of two different fish. The players holding pictures of these fish exchange seats. The caller also tries to get a seat.



The player left without a seat becomes the new caller. When "Fish Net Scramble" is called, everyone must change seats.

Note: Students could also do this as a reading activity by writing the names of various fish on fish shapes.

L 2. Which Fish?: Provide each student with a worksheet showing the different varieties of local fish. As you call out, "Populations of (name of fish) live near (community)." students draw a circle around the fish mentioned.

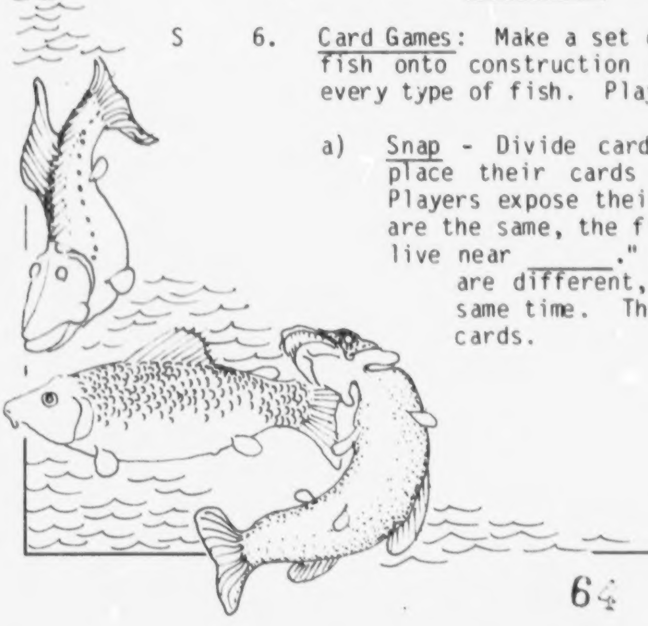
L/S 3. Pass the Fish: Divide players into teams. Have each team stand in a line behind a table. Place identical sets of fish cards on each table. When you give the signal to start, the first player on each team starts passing one of the fish down his line. Each player must handle the fish and call out its name. When the fish reaches the last player, it goes back through the line to the first player. S/he replaces the fish on the table and starts the second fish on its way. The first team to pass all of its fish down the line and back wins the game.

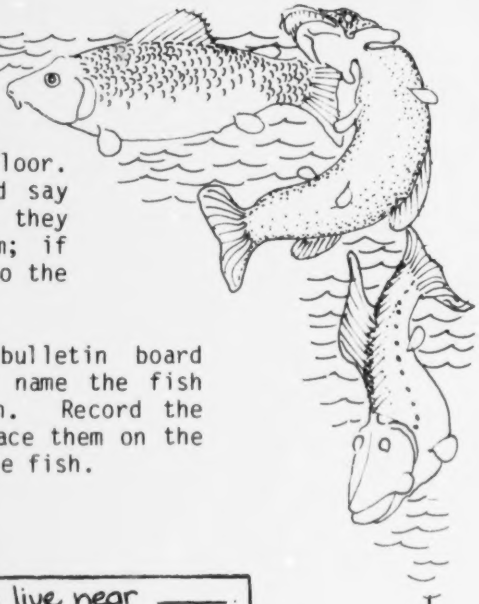
S 4. Fish and Fishermen: Select eight players (or fewer) to be Fish. They stand in front of the room. Each chooses a picture of a fish, then calls out its name and displays its picture. The rest of the players are Fishermen. They put their heads down while the Fish change the order in which they are standing. When the Fish call, "Awaken, Fishermen," the Fishermen raise their heads. Ask different fisherman to correctly name the Fish in their new order. The first Fisherman to name them correctly goes to the front of the room and chooses a new group to be Fish for the next game.

L/S 5. Pass the Fish: Pass a paper fish around a circle as music plays. When the music stops ask, "What fish populations live near __________?" The student holding the fish responds using the sentence pattern. "Populations of __________ live near __________."

S 6. Card Games: Make a set of cards by pasting illustrations of local fish onto construction paper. There should be four cards for every type of fish. Play various card games:

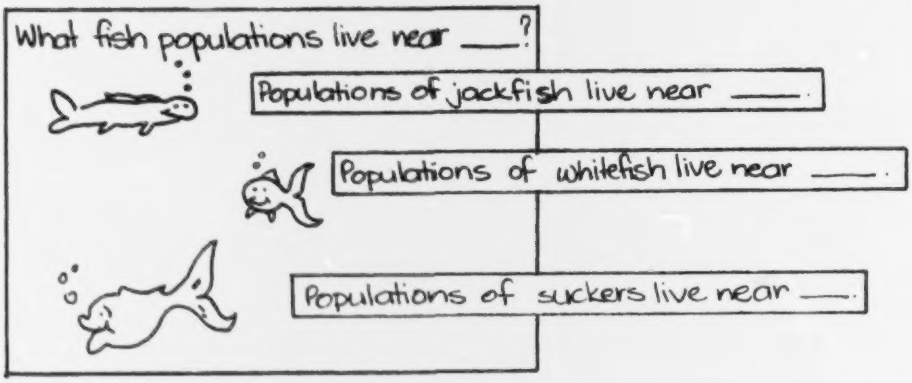
a) Snap - Divide cards evenly between two players. Players place their cards face down in piles in front of them. Players expose their first cards at the same time. If they are the same, the first player to call, "Populations of ____ live near ______." keeps both cards. If the fish pictured are different, players expose their second cards at the same time. The game ends when one player holds all the cards.





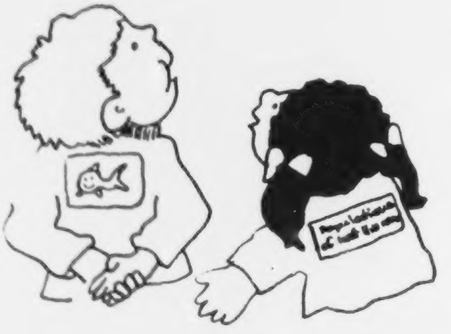
b) Concentration: Make up a set of cards (4 of each type of fish) and place them face down on the floor. Students must turn up two cards and say the names of the fish pictured. If they are the same, she/he may keep them; if different, she/he must return them to the face down position.

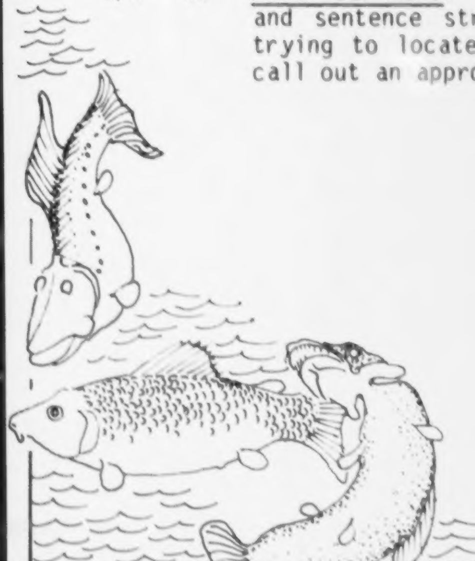
S/R 7. a) Sentence Strips: Refer to the bulletin board created in CD #4b). Have students name the fish pictures using the sentence pattern. Record the statements on sentence strips and place them on the bulletin board next to the appropriate fish.

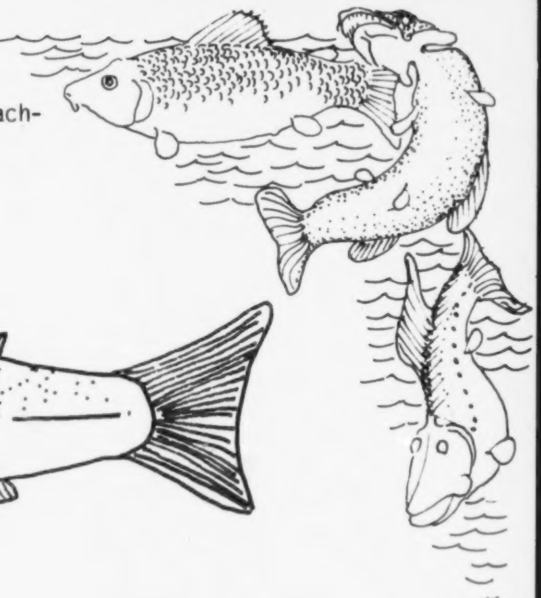

What fish populations live near ___?
Populations of jackfish live near ___.
Populations of whitefish live near ___.
Populations of suckers live near ___.

b) Sentence Strips: Write the names of the various fish populations on cards. Distribute cards to students. Have them match them to the sentence strips and read the statements.

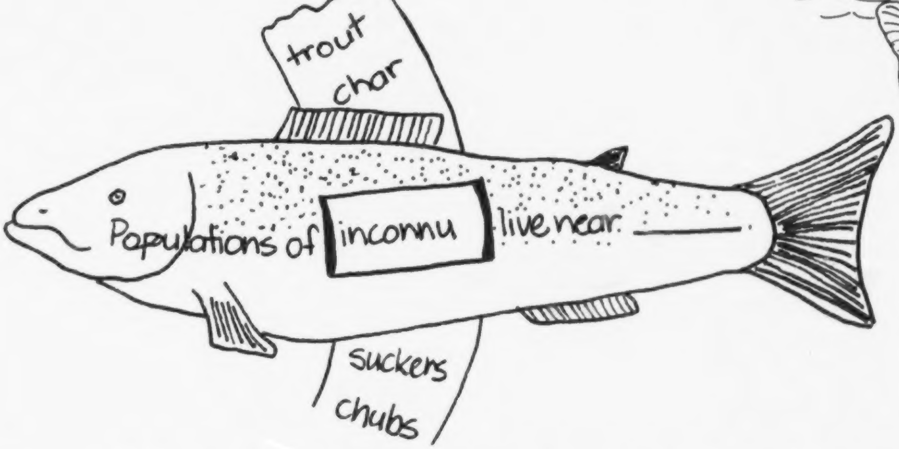
S/R 8. Find Your Mate: Pin pictures of the fish on the backs of some students and sentence strips on others. Students walk around the classroom trying to locate their partners. When they do, they join hands and call out an appropriate statement.







R/W 9. Tachistoscopes: Have students make tachistoscopes as shown:



Have them write the names of as many fish as they can think of on the paper strip. They should then read each statement, decide if it is true or false, and copy any true statements on a separate paper. Have students check each others statements.

Application

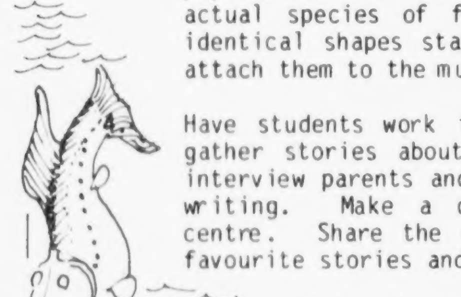
1. Enlarge the fish illustrations, then cut them in half. Students work in pairs to attempt to match the correct halves.

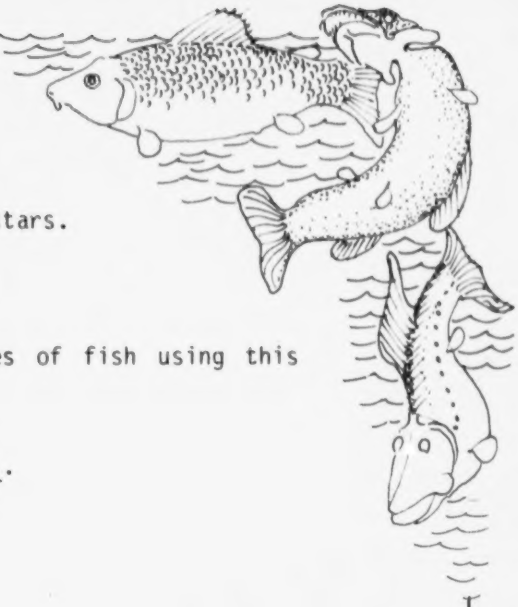
2. Make a large map of the area around your community. Have students discuss their fishing experiences. Mark places on the map where they have fished. Note the methods of fishing used and the types of fish caught.

3. Divide the class into two groups. One group will make a mural of fish populations found near your community; the other group, a mural of fish populations not found near your community. (These could be fantasy fish or actual species of fish.) To make 3-D murals, make stuffed fish (two identical shapes stapled together, painted and stuffed with newspaper) and attach them to the mural. Display.

Have students work in pairs with students from another (older) class to gather stories about fish or fishing in your community. The pairs could interview parents and elders, and record legends and stories on tape or in writing. Make a collection of the stories for the library/listening centre. Share the collection with parents. Have students select their favourite stories and invite elders into the classrom to tell them.

5. a) Make up rhymes about different species of fish using this pattern:





I often wish I was a fish
And then I could have any wish.

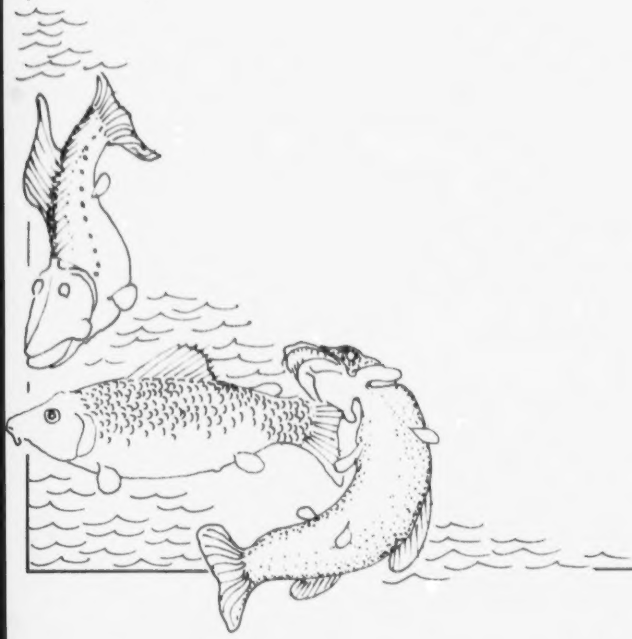
If only I was an Arctic Char
I'd swim in the ocean, under the stars.

If only I was ________
I'd ____________________

b) Make up rhymes about different species of fish using this pattern:

I went fishing for a ________.
But instead I caught a ________.

E.g., I went fishing for a char.
But instead I caught a car.



Science/Social Studies

1. Japanese Fish Prints - Lay fish on a sheet of newspaper. Cover it with a thin coat of paint (poster paint). Place a sheet of paper (preferably rice paper or newsprint) carefully over the fish and press down firmly. Lift the paper off. Identify various parts.
2. Fish Cast - Put a layer of soft clay in the bottom of a shoebox (larger than the fish). Press the fish into the clay so that it is half buried. Mix plaster of paris until it is the consistency of cream. Carefully remove the fish and pour the plaster into the impression. Bend a paper clip into a hook and stick the ends into the hardening plaster for use as a hangar. When the plaster is dry, peel away the box and clay. Paint the cast and hang it on your wall.
3. Make a list of all the parts of a fish that move.
4. If you look under a magnifying glass, what would a fish skin look like? Draw a close-up picture.

Teacher's Notes

These are possible activity ideas for this topic. They can be used in lessons you make up, as enrichment activities, or as learning centre activities. Most can be done in any language. Activities with an * are actually used in the sample lessons which follow. Spaces have been left for you to record your own activity ideas.

Science/Social Studies con't

5. Teacher draws a fish on blackboard. Students close their eyes. Teacher erases one part of the fish. Students name the missing part.

ACTIVITY IDEAS

TOPIC B: APPEARANCE AND BEHAVIOUR

Math

1. Invite the local Wildlife/Fisheries Officer to your classroom to demonstrate how you may determine the age of a fish by counting the rings on its earbone.

Language Arts

1. Make up new collective nouns to describe groups of fish. For example: a flicker of grayling, a swarm of sharks, etc.
2. Write three words that tell how a fish would feel if you could touch it.

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Music, Poems, Stories

1. "My Fish"
2. "Did You Ever?"
3. "Little Fish"
4. "Five Little Fishes"
5. "Apusski Dusky"
6. Action Rhyme
7. "Ten Little Fishes"
8. "Fish"
9. "Fish"

Art

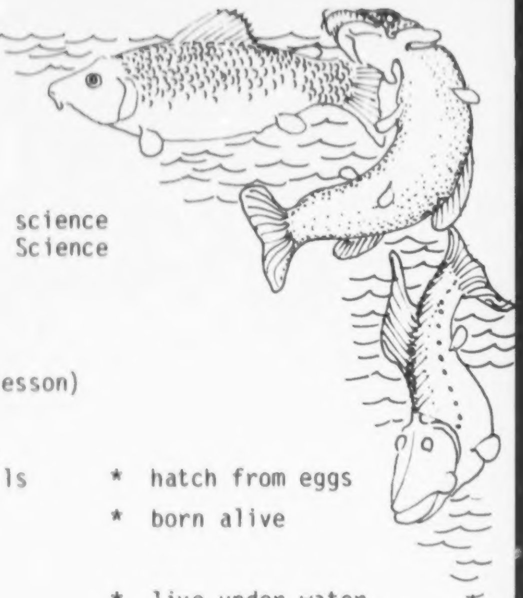
1. Fingerpaint fish.
2. Thumbprint fish.
3. Fish scale art.
4. Outline fish forms on poster board with pieces of drinking straws. Glue an assortment of beans, noodles, pebbles, bits of paper, etc. onto fish shapes.
5. Sketch fish designs on paper the same size as a piece of foil paper. Place sketches on top of cushioned foil and trace, indenting the foil slightly. Press out the main shapes (eyes, gills, etc.) by gently rubbing with a wooden spoon. When the foil is turned over, these shapes will stick out in relief. Colour the design with markers.
6. Fish vertebrae necklaces.
7. Make fish from baker's clay. (1 C. flour, 1/4 C. salt, 1/2 C. water.) Bake them in a 275° oven overnight. Paint them, then spray with varnish.
8. Have students make stuffed tissue paper fish and attach them to long sticks. Students begin by cutting two large fish shapes from coloured tissue paper. Paint, cut paper, foil or other details may be added. Glue around all edges but one. When dry, stuff with small scraps of paper.

Physical Education/Movement

Art con't

9. Do rubbings over a variety of textures that can be found in the room. Students cut paper out in the shape of fish and add cut paper details.

Special Activities



LESSON: **WHAT IS A FISH?**

As this lesson emphasizes language related to science concepts, you may wish to teach it during your Science period.

English Vocabulary (* actually developed in this lesson)

- * cold-blooded
- * warm-blooded
- * scales
- * skin and fur or hair
- * breathe through gills
- * breathe fresh air
- * fins
- * arms and legs
- * hatch from eggs
- * born alive
- * live under water
- * can't live underwater all the time

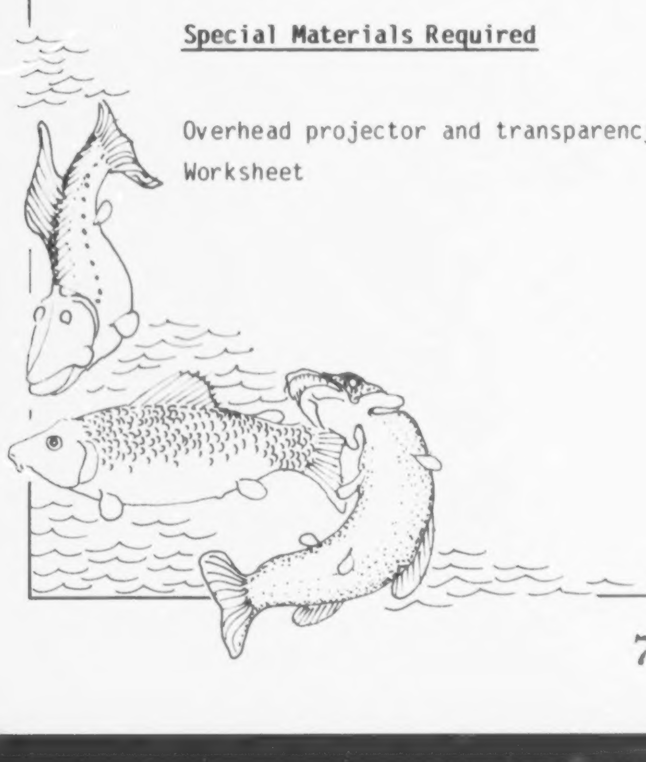
English Sentence Patterns (* actually developed in this lesson)

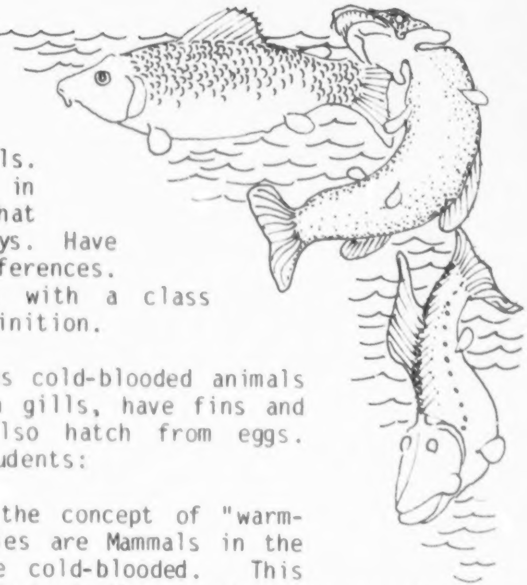
* How are fish different from mammals?
* Fish ________, but mammals ________.

Is a ________ a fish? Yes, a ________ is a fish.] Exposure only
No, a ________ is a mammal.]

Special Materials Required

Overhead projector and transparency
Worksheet





Concept Development/Language Exposure

1. a) Review the characteristics of mammals. (See Lesson #2 - Whales are Mammals in the Whales unit.) Tell students that fish differ from mammals in several ways. Have students attempt to explain these differences. Through discussion, try to come up with a class definition of "fish." Record this definition.

   b) Explain that scientists define fish as cold-blooded animals that live underwater, breathe through gills, have fins and usually have scales. Most fish also hatch from eggs. Explore each of these concepts with students:

      i) Fish are cold-blooded - Review the concept of "warm-blooded." (See Lesson #2 - Whales are Mammals in the Whales unit.) Some animals are cold-blooded. This means that the temperature of their bodies is the same as the temperature of the air or water in which they live; their body temperature changes with the temperature of the air or water around them. Fish are cold-blooded because their body temperature is always the same as the temperature of the water they live in. Tell the story "Catching Fish."

Catching Fish

Dad set a net under the ice so he could catch jackfish (or whatever fish is prevalent in the area) to feed his dogs. The next day, Henry and Margaret went to check the nets with their father. It was a very cold day. The wind was strong and the children pulled up their hoods and wore their warm mittens.

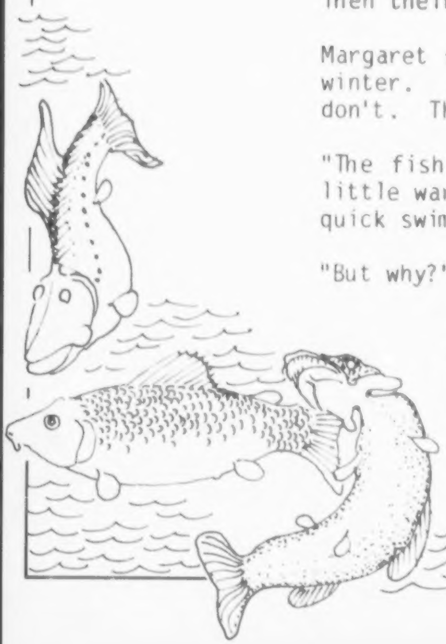
When they pulled up the net they found lots of fish. They had to untangle them from the net. It was difficult in mittens. They took their mittens off for a while so they could work faster. Then their hands got so cold!

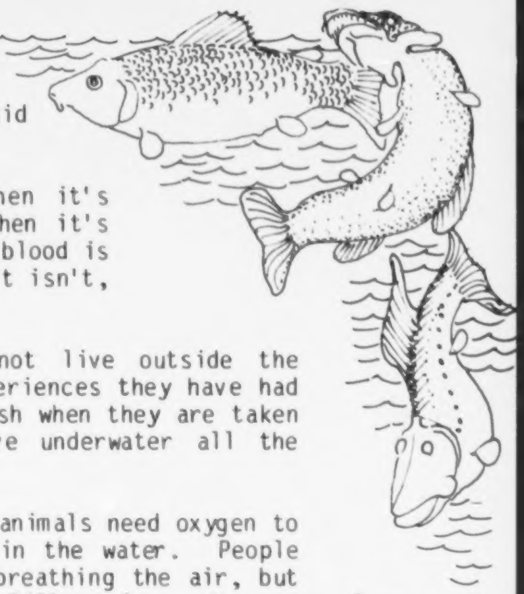
Margaret said, "All the animals have warm fur or feathers in the winter. And look at us, we wear lots of clothes. But the fish don't. They must be so cold in the water."

"The fish swim close to the bottom of the lake where it stays a little warmer," said Dad. "But we couldn't live or even go for a quick swim down there. Only fish can!"

"But why?" asked Henry.

"When the water is cold the fish's blood is cold," explained Dad. "When the water is warm the fish's blood is warm. Of course they will die if the water is too hot or too cold."





"That's the same as us," said Margaret. "Isn't it?"

"No! People are different. When it's cold, people's blood is warm. When it's hot, people's blood is warm. Our blood is always the same temperature. If it isn't, then we are sick."

ii) Fish live in water - Fish cannot live outside the water. Have students relate experiences they have had with fishing. What happens to fish when they are taken out of water? Can mammals live underwater all the time? Why not?

iii) Fish breathe through gills - All animals need oxygen to live. Oxygen is in the air and in the water. People and other mammals get oxygen by breathing the air, but fish get oxygen from the water. Fill a glass with water from a tap. Observe the air bubbles that collect on the side of the glass. This shows that there is air (and, therefore, oxygen in the water). Observe a fish swimming in an aquarium. Identify the gills and observe the gill movements. A fish opens its mouth to take in water, then closes it mouth and forces the water out through the gills. As the water goes over the gills, they take oxygen from the water for the fish to use.

iv) Fish have fins - Fish do not have arms and legs, instead they have fins. Observe fish swimming. Why do they need fins?

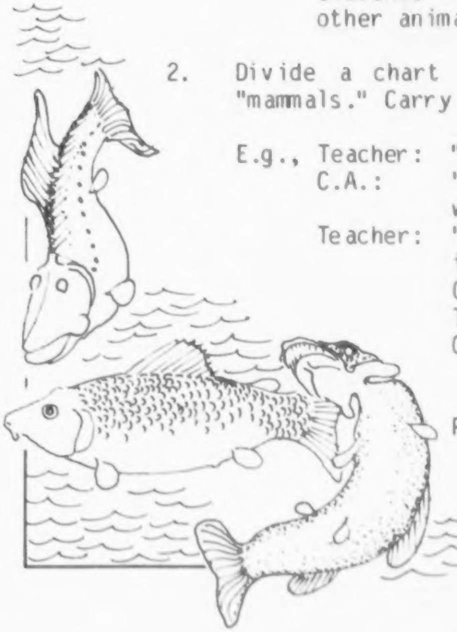
v) Fish have scales - Have students observe the scales on a fish. How are the scales different from our skin? Do fish have fur or hair?

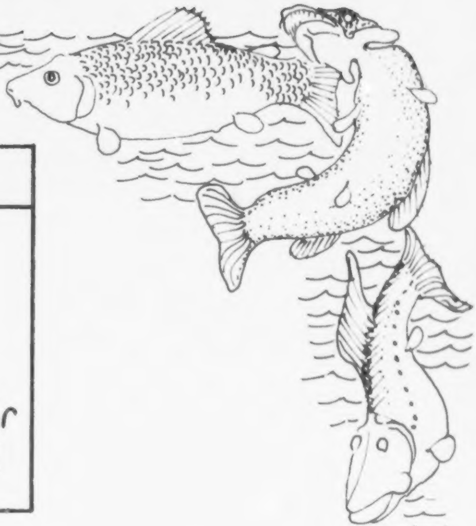
vi) Fish hatch from eggs - (Note: Most fish hatch from eggs.) Try to obtain a fish that is full of eggs. Examine the eggs. Ask students if they have ever seen fish eggs in the water. What other animals lay eggs? Do mammals lay eggs?

2. Divide a chart in half. Label one side "fish" and the other side "mammals." Carry on a a conversation with your C.A. or a puppet.

E.g., Teacher: "How are fish different from mammals?"
C.A.: "Well, fish are cold-blooded but mammals are warm-blooded."
Teacher: "You mean a fish's temperature is the same as the water it is swimming in?"
C.A.: "That's right."
Teacher: "How else are fish different from mammals?"
C.A.: "Fish breathe through gills, but mammals breathe fresh air."

Record the differences on the chart.





How are fish different from mammals?

fish	mammals
cold-blooded	warm-blooded
breathe through gills	breathe fresh air
hatch from eggs	are born alive
have fins	
have scales	have skin and fur or hair
live underwater	can't live underwater all the time

Review the concepts using the sentence pattern:

Fish are cold-blooded, but mammals are warm-blooded.

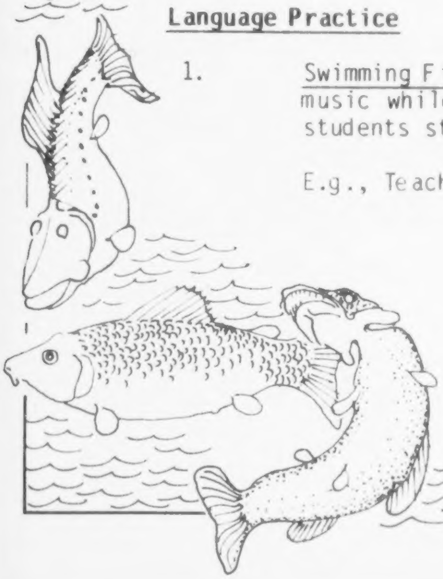
3. Brainstorm a list of animals that spend most of their time in water. Your list may look like this:

seal
walrus
narwhal
char
beluga
stickleback

OR

trout
muskrat
whitefish
beaver

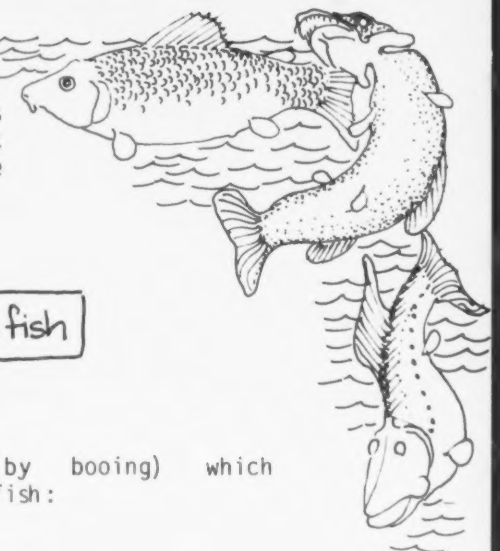
Have students determine whether the animals are fish or mammals based on the characteristics noted on the chart.



Language Practice

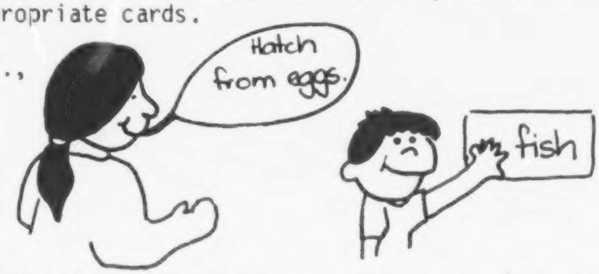
1. Swimming Fish: Students pretend to be fish and swim about to water music while you make statements. If you make a false statement, students stand still.

E.g., Teacher: "Fish breathe through gills, but mammals breathe fresh air."
"Fish are cold-blooded, but mammals are warm-blooded."
"Fish are born alive, but mammals hatch from eggs." (Students stand still.) .



L 2. Categories: Give each student two cards reading "fish" and "mammal." Call out characteristics; students hold up the appropriate cards.

E.g.,



L/S 3. Elimination: Students indicate (by booing) which characteristics are not associated with fish:

Teacher: "Fish breathe through gills."
"Fish have hands and feet." (Boo!)
"Fish are covered with fur." (Boo!)
"Fish live underwater."
"Fish are cold-blooded."
"Fish are born alive." (Boo!)

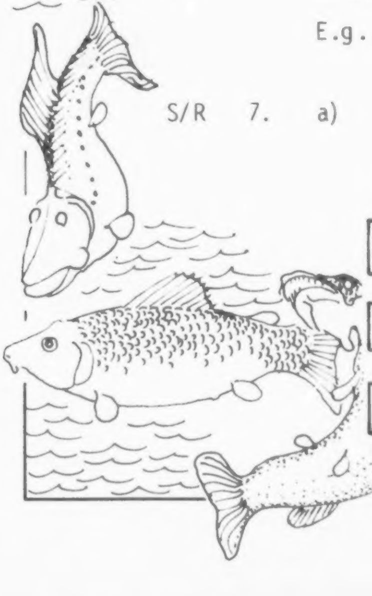
L/S 4. Hot Potato: Have students sit in a circle on the floor. Instruct them to listen for a specific sentence (e.g., Fish live underwater, but mammals live on land.) which they will have to repeat. Give them a stuffed toy and have them pass it around until the music stops. Whoever is holding the toy at that time must repeat the sentence.

L/S 5. Fishing Line Game: Divide the class into two teams. The object of the game is to see which team can make the longest fishing line. Ask the first player on Team A, "How are fish different from mammals?" If s/he answers correctly s/he strings a bead on a piece of string. If the answer is incorrect, the first player of Team B may try to answer. Play for a specified time. The team with the most beads on their fishing line wins.

L/S 6. Sentence Completion: Begin a statement; students complete it.

E.g., Teacher: "Fish have fins, but mammals have ____ _____."
Students: "Arms and legs."

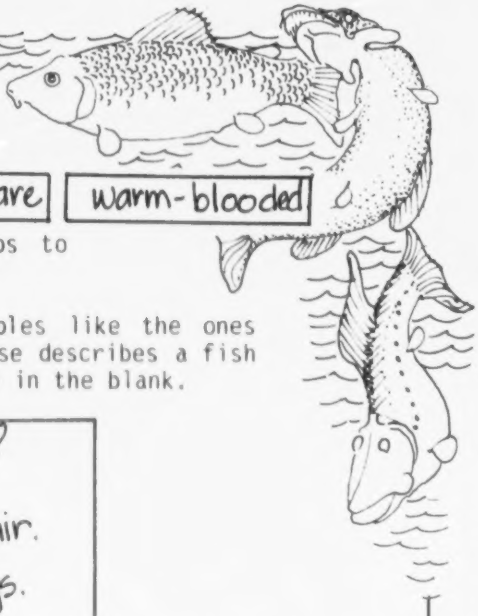
S/R 7. a) Sentence Strips: Refer to the chart (CD/LE #2). Have students use the characteristics noted in the sentence pattern. Record their statements on sentence strips. Chant these with the class.



How are fish different from mammals?

Fish breathe through gills, but mammals breathe fresh air.

Fish are cold-blooded, but mammals are warm-blooded.



b) Cut the sentence strips into words and phrases.

Fish	are cold-blooded	but	mammals	are	warm-blooded

Have students reconstruct the strips to make true statements.

R/W 8. Worksheet: Make a worksheet with examples like the ones shown below. Students decide if the phrase describes a fish or a mammal, and write the correct choice in the blank.

Fish or Mammals?

________ breathe fresh air.

________ hatch from eggs.

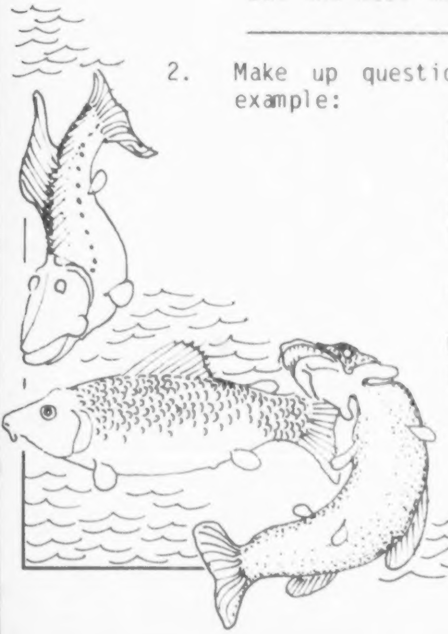
S/R/W 9. a) Fill in the Blanks: Write the statements on an overhead transparency leaving out words/phrases. Have students provide these words orally, then write them in on the overhead.

b) Fill in the Blanks: Make a worksheet using the above technique. Be sure that the models of the correct statements are available to students.

Application

1. Develop an information booklet about fish using Muriel Batherman's Some Things You Should Know About My Dog (Prentice-Hall, Inc., 1976):

The first thing you should know about a fish is that __________.
The second thing you should know about a fish is that __________.
The third thing you should know about a fish is that __________.
But the most important thing you should know about a fish is that __________________.



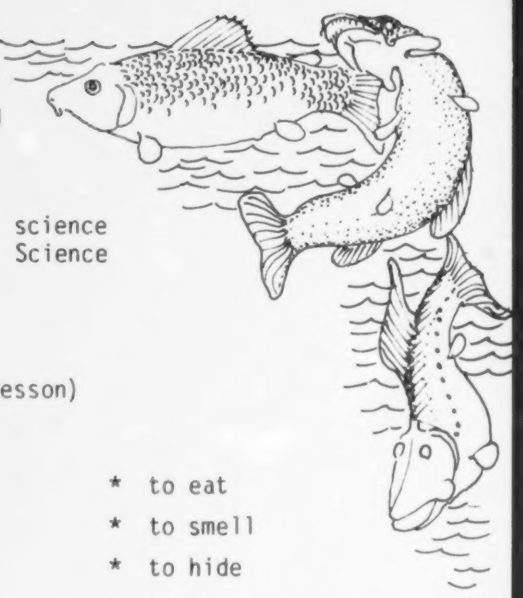
2. Make up questions and answers about fish and other mammals. For example:

Fish, fish do you have fur?
No, no, I have scales.

Fish, fish do you have legs?
No, no I have a tail.

Etc.

Write each question/answer pair on a large sheet of paper and have students illustrate. Put the pages together to make a Big Book.



LESSON: **THE OUTSIDE OF A FISH**

As this lesson emphasizes language related to science concepts, you may wish to teach it during your Science period.

English Vocabulary (* actually developed in this lesson)

- * eye/s
- * nostril/s
- * mouth/s

- * gill/s
- * fin/s
- * tails
- * scale/s
- lateral line/s (optional)

- * to see
- * to breathe
- * to steer
- * to swim
- * to sense danger

- * to eat
- * to smell
- * to hide
- * to turn
- * to protect themselves

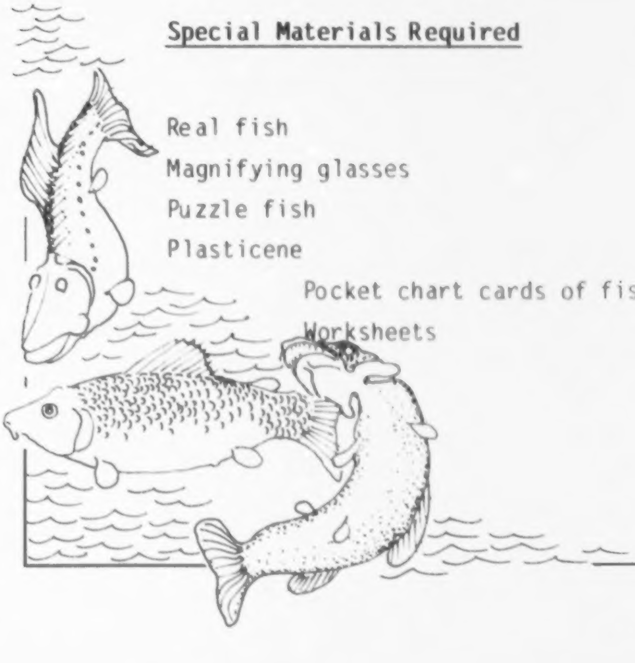
English Sentence Pattern (* actually developed in this lesson)

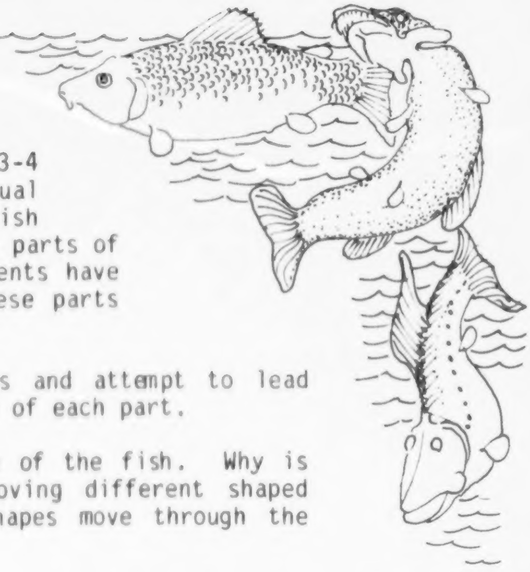
* Does a _________ have _________?
* Yes, all fish have _________.
* No, some fish don't have _________.

* How do fish use their _________?
* Fish use their _________ to _________.

Special Materials Required

Real fish
Magnifying glasses
Puzzle fish
Plasticene
Pocket chart cards of fish parts
Worksheets





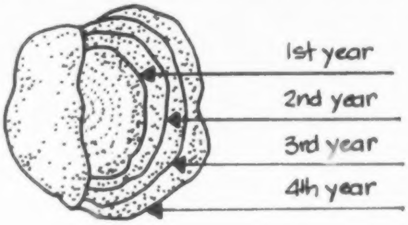
Concept Development/Language Exposure

1. Divide the class into small groups (3-4 students) and provide each group with an actual fish specimen. Have them observe the fish carefully. Ask students to name the various parts of the fish. Point out any features the students have not identified and have students locate these parts on their fish.

2. Observe and discuss the various fish parts and attempt to lead students to an understanding of the function of each part.

   a) Body Shape - Observe the general shape of the fish. Why is the fish shaped like this? (Try moving different shaped objects through water to see which shapes move through the water best.)

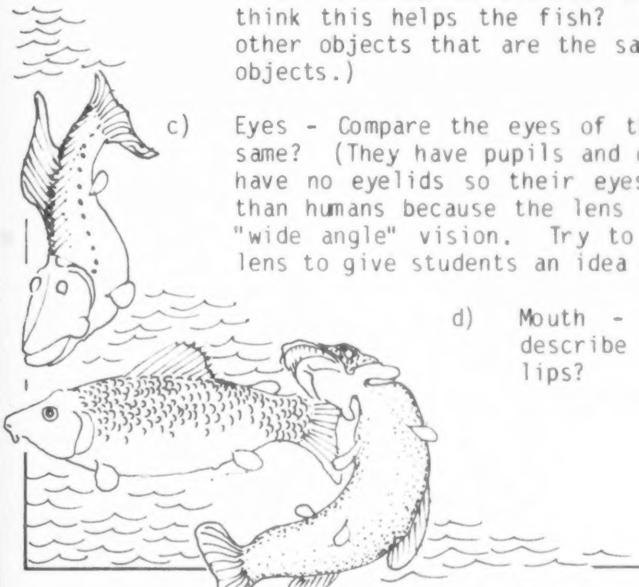
   b) Scales - Look at the fish scales and note the sizes (are they all the same size?), shapes and colours. Bend the fish back and forth and observe what happens to the scales. Why are scales a good covering for fish? (They give protection but allow the fish complete freedom of movement.) Use magnifying glasses to look at individual scales. Like the growing rings on a tree, the number of rings on a fish scale tell the fish's age. Have students try to determine the ages of their fish.

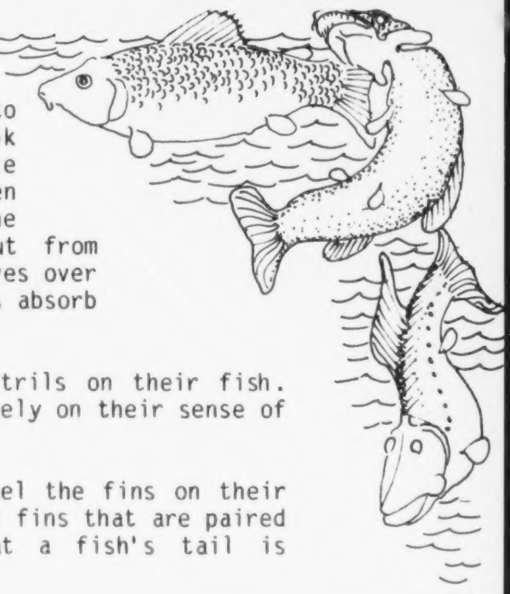


   Note the colour of the fish scales. Are they all the same? How do you think this helps the fish? (Hide objects around the room on top of other objects that are the same colour. Have students try to find the objects.)

   c) Eyes - Compare the eyes of the fish to human eyes. How are they the same? (They have pupils and corneas.) How are they different? (Fish have no eyelids so their eyes are always open.) Fish see differently than humans because the lens of a fish's eye bulges out and allows it "wide angle" vision. Try to find photographs taken with a "fish-eye" lens to give students an idea of how fish might see.

   d) Mouth - Does your fish have teeth? Feel and describe the teeth. Does the fish have a tongue? lips?





e) Gills - Bend the gill cover forward to reveal the gills. What do they look like? Describe how a fish breathes: The fish opens its mouth, takes in water, then closes it mouth. The water moves from the fish's mouth, past its gills, and out from beneath the gill cover. As the water moves over the gills, the blood vessels in the gills absorb oxygen from the water.

f) Nostrils - Have students locate the nostrils on their fish. Why do fish have nostrils? (Many fish rely on their sense of smell to find food.)

g) Fins/Tail - Have students extend and feel the fins on their fish. What do they feel like? Note the fins that are paired and those that are not. Explain that a fish's tail is actually a special kind of fin.

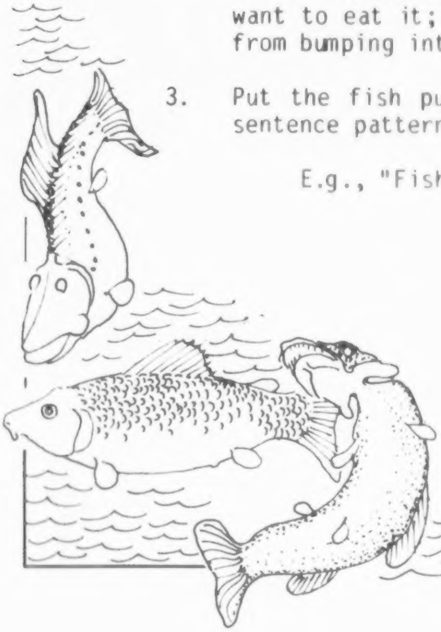
Observe fish swimming in the aquarium. Which fins do they use to:

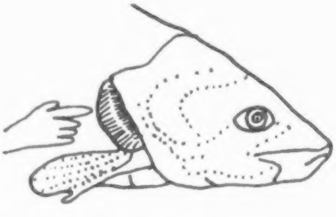
- move forward? (tail fin)
- turn left or right? (tail fin)
- swim backwards? (pectoral/pelvic fins or fins attached to the sides of fish)
- stay in one spot? (pectoral/pelvic fins or fins attached to the sides of fish)
- move up and down? (pectoral/pelvic fins or fins attached to the sides of fish)
- keep from rolling over? (dorsal/anal fins or fins attached to the back and belly of fish)

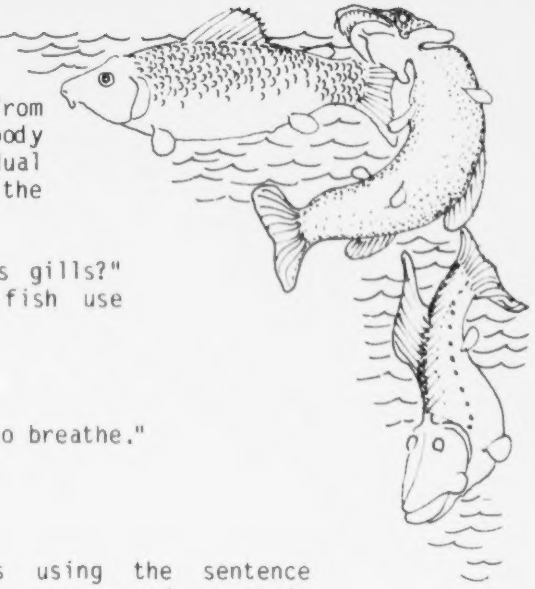
h) Lateral Line - Many fish have an obvious line that runs from the gills to the tail fin. Have students attempt to locate such a line on their fish. The lateral line contains many sensory receptors that help a fish to detect other fish or animals and obstacles. Why is it important for a fish to be able to detect these things? (Other fish or animals may want to eat it; to help it swim in a "school" with other fish; to keep from bumping into obstacles.)

3. Put the fish puzzle pieces together. As you add each piece, use the sentence pattern to name the part and describe its function.

E.g., "Fish use their gills to breathe."







4. Have students make models of fish from plasticene. Be sure that they include all body parts. Discuss the fish with individual students to give them another exposure to the sentence pattern.

   E.g., "Johnny, can you show me your fish's gills?" (Student points to them.) "How do fish use their gills?"

   "To breathe."

   "That's right. Fish use their gills to breathe."

Language Practice

L 1. Which Part?: Call out statements using the sentence patterns. Students indicate the body part named on their model fish.

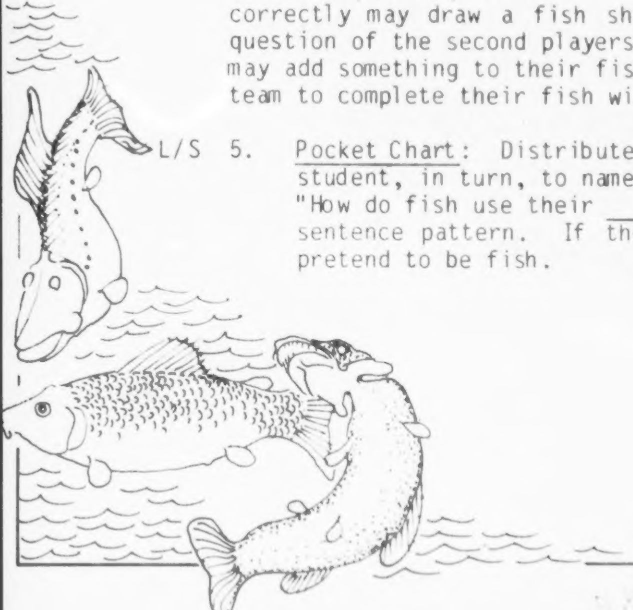
L 2. Which Part?: Place the puzzle pieces on the floor and have students stand in a circle around them. Call out a statement and the names of two students. Have them "swim" into the circle and find the part named. (After all students have had a turn, do the activity again. This time, students must repeat the statement.)

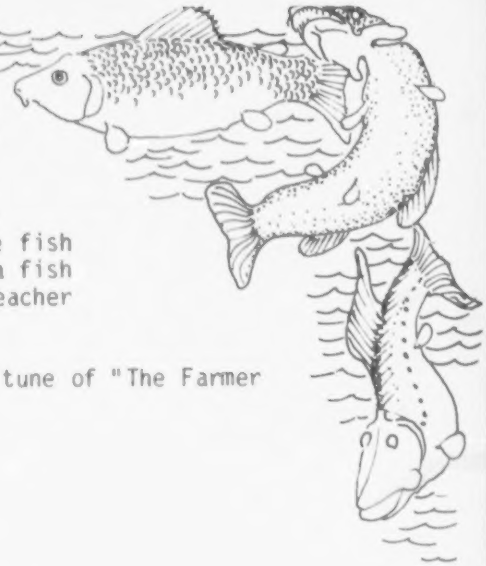
L 3. Big Jack (Char) Says: Make a series of statements. If they are true, students pretend to be fish; if they are false, students stand still.

E.g., "Big Jack says, 'Fish use their mouths to sing.'"
"Big Jack says, 'Fish use their fins to steer.'"
Etc.

L/S 4. Picture Relay: Divide class into four teams. Have each team stand facing the board or a large sheet of paper. Ask a question (using the sentence pattern) of the first player in each team. Those who answer correctly may draw a fish shape on the board or paper. Ask another question of the second players on each team. Those who answer correctly may add something to their fish (e.g., tail, fin, eye, etc.). The first team to complete their fish wins.

L/S 5. Pocket Chart: Distribute pocket chart cards to students. Ask each student, in turn, to name the fish part s/he is holding. Then ask, "How do fish use their __________?" The student responds using the sentence pattern. If the response is correct, the other students pretend to be fish.





L/S 6. Musical Fish: Tape fish shapes to the floor around the room. (There should be one less fish than there are players.) Play "water music" and have students pretend to be fish swimming around. When the music stops, players must stand on the fish shapes. The student who is left without a fish must answer a question asked by the teacher before s/he can re-enter the water.

S 7. a) Pocket Chart: Make up a song to the tune of "The Farmer in the Dell." For example:

Fish use their eyes to see.
Fish use their eyes to see.
Hi, ho, the fishy'o
Fish use their eyes to see.

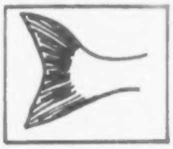
Fish use their nostrils to smell...
Fish use their gills to breathe...
Fish use their tails to swim...
Fish use their fins to steer...

Etc.

Sing the song as you place appropriate cards in the pocket chart.

S/R b) Sing the song again, this time placing sentence strips next to the cards.

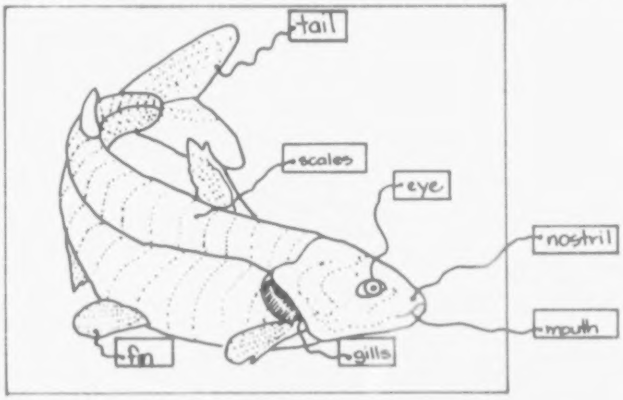
E.g.,

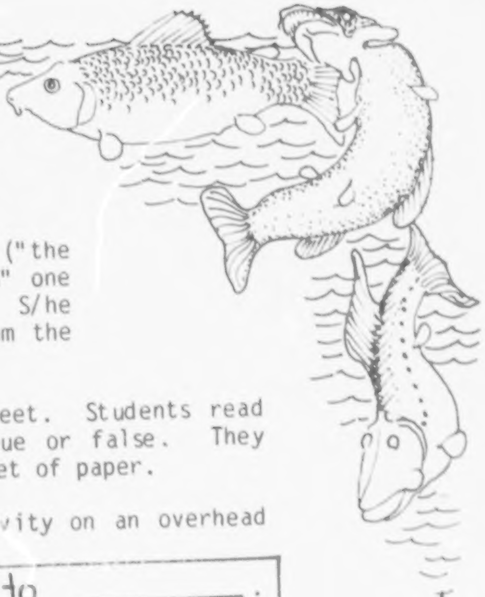


Fish use their tails to swim.

Remove the cards from the pocket chart and distribute. Students replace them next to the correct sentence strips and read the sentences.

R 8. Bulletin Board: Put the puzzle fish together on a bulletin board. Have students match labels to the appropriate parts with lengths of yarn.





R 9. Fishing: Have two students stand facing each other with their hands raised and joined. The remaining students stand in a line and file under the other students' raised arms. On a signal from the teacher, the two students lower their arms ("the net") and catch a "fish." Show the "fish" one of the sentence strips (from activity 7b). S/he must read it in order to be released from the net.

R/W 10. True/False: Write statements on a worksheet. Students read the statements and decide if they are true or false. They copy any true statements on a separate sheet of paper.

W 11. Vanishing Drill Worksheet: (Do this activity on an overhead first.)

Fish use their eyes to ________.

Fish ____ their gills to ________.

____ ____ their tails to ________.

____ ____ ____ fins __ ________.

____ ____ ____ ____ __ ________.

breathe swim steer nostrils see

mouths hide scales turn eat

R/W 12. Worksheet: Be sure to provide a model for students.

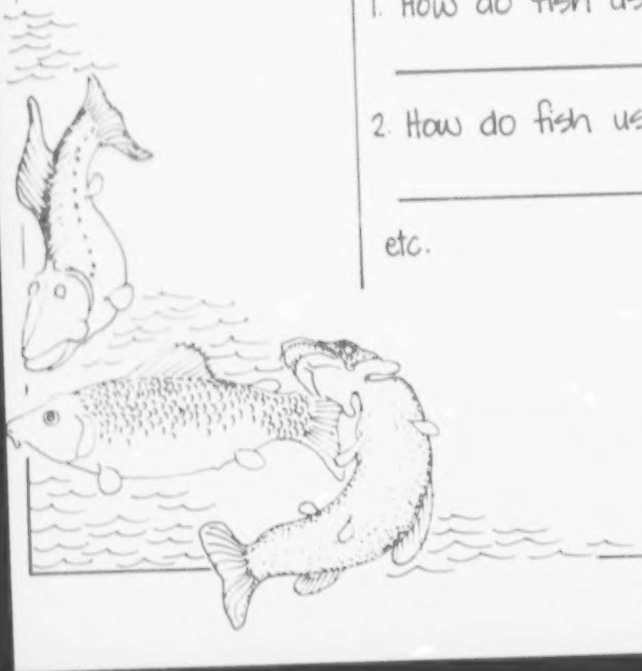
1. How do fish use their eyes?

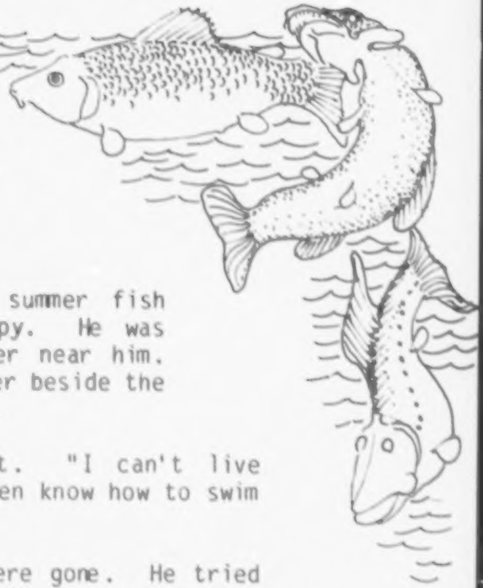
____

2. How do fish use their nostrils?

____

etc.





Application

1. Tell the story "The Boy Who Became a Fish" with shadow puppets.

The Boy Who Became a Fish

Henry was resting by the river at summer fish camp. It was very hot and he was sleepy. He was watching a whitefish swimming in the water near him. Suddenly, Henry was diving through the water beside the whitefish. He went down and down and down.

"What's happening to me?" he thought. "I can't live underwater. I can't breathe. I don't even know how to swim very well."

He tried to kick his legs but they were gone. He tried to move his arms but they were gone too. His body had become very long, just a like a fish. And he had gills, scales, fins, a tail, a mouth, and teeth. His skin was quite a different colour. It was green and silver.

"I've become a fish," he thought.

"I like this dream. I can live in the river and now I can swim very well. I have gills to breathe. I have eyes to see. Look, there's an insect! Yum Yum. Delicious. I have a mouth and teeth to eat. I like this dream."

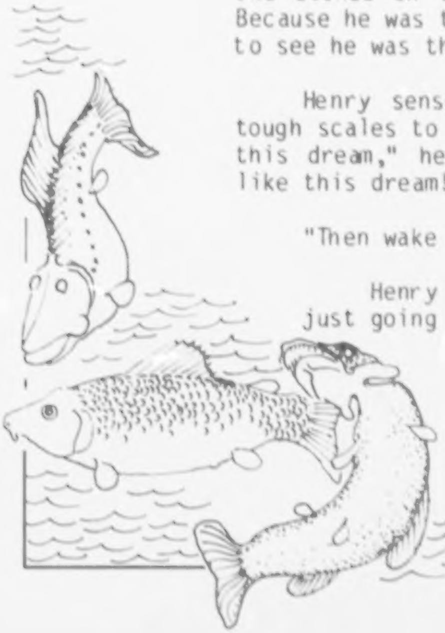
Henry flicked his tail back and forth. He swam very fast. "This is fun. I have a tail to swim." He wiggled his fins. "I have fins to steer. I can go here and there! I like this dream."

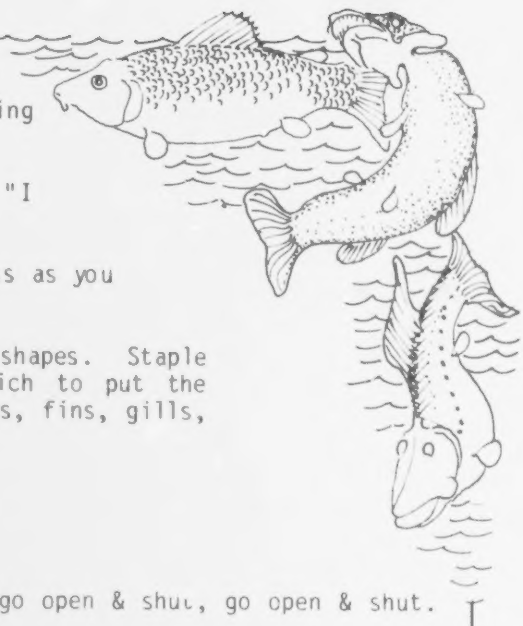
Then Henry sensed danger. A big jackfish was swimming close by. Henry didn't have a chance to swim away. He dove down deep and lay on the stones on the bottom of the river. He lay as still as he could. Because he was the same colour as the gravel and stones it was very hard to see he was there. "I have a special colour to protect me!"

Henry sensed that the jackfish was coming even closer. I have tough scales to protect me!" But Henry was still afraid. "I don't like this dream," he said to himself. "I don't like this dream! I don't like this dream!!"

"Then wake up," said Margaret.

Henry sat up. "Thanks Margaret, you saved me. A jackfish was just going to eat me."





Margaret laughed. "Was it climbing up the bank on its hands and knees?"

Henry laughed, but not a lot. "I guess it was just a dream," he said.

Let students take turns operating the puppets as you narrate the story.

2. Make stuffed fish: Cut two identical fish shapes. Staple them together, leaving a hole through which to put the stuffing. Staple shut. Add features - eyes, fins, gills, etc. Hang from the ceiling.

3. Learn the following action songs:

Song to the tune of "The Wheels on the Bus"

Fish have mouths that go open & shut, go open & shut, go open & shut.
(OPEN & CLOSE MOUTHS LIKE FISH)
For eating up their food.

Fish have eyes that stay wide open, stay wide open, stay wide open.
For seeing underwater.

Fish have gills that go in and out, in and out, in and out.
(PUT INSIDE OF HANDS IN FRONT OF EARS AND MOVE IN AND OUT)
Fish have gills that go in and out
for breathing in the water.

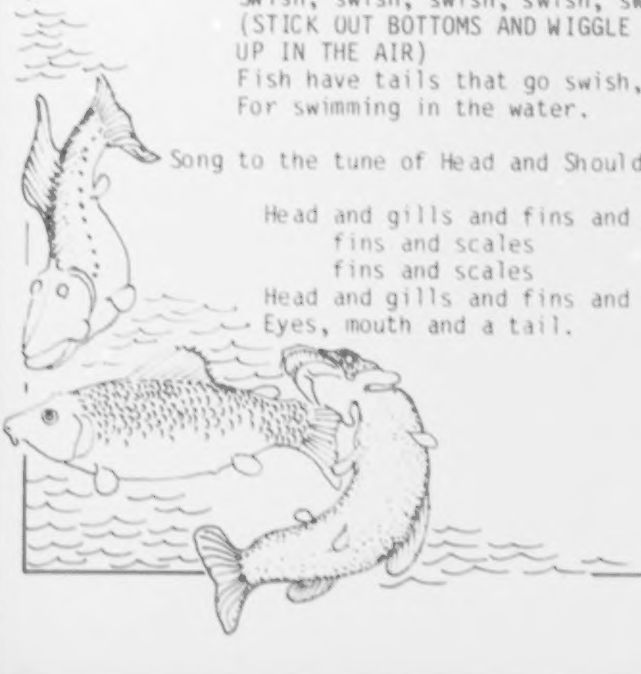
Fish have fins that go up and down, up and down, up and down.
Fish have fins that go up and down,
(WRISTS AGAINST WAISTS AND MOVE HANDS UP AND DOWN)
For swimming through the water.

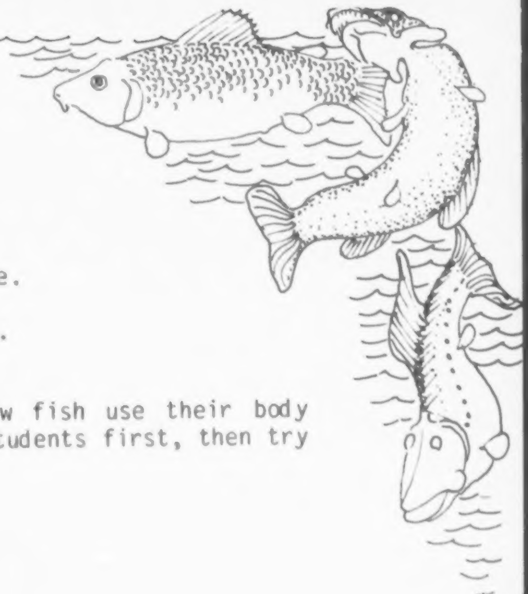
Fish have tails that go swish, swish, swish,
Swish, swish, swish; swish, swish, swish
(STICK OUT BOTTOMS AND WIGGLE THEM) (or LIE ON THE FLOOR AND HOLD LEGS UP IN THE AIR)
Fish have tails that go swish, swish, swish
For swimming in the water.

Song to the tune of Head and Shoulders, Knees and Toes

Head and gills and fins and scales
fins and scales
fins and scales
Head and gills and fins and scales
Eyes, mouth and a tail.

(TOUCH HEAD, MAKE GILLS AND FINS AS IN PREVIOUS SONG. RUN HANDS UP AND DOWN SIDES FOR SCALES. TOUCH EYES, MOUTH AND STICK OUT BOTTOM FOR TAIL)





4. Teach the following poem to the students:

I use my brain to think, think, think.
I use my nose to smell.
I use my eyes to blink, blink, blink.
I use my throat to yell.
I use my mouth to giggle, giggle, giggle.
I use my hips to bump.
I use my toes to wiggle, wiggle, wiggle.
I use my legs to jump.

Use this model to develop a poem about how fish use their body parts. Brainstorm possibilities with the students first, then try to fit them into the model.

E.g., What does a fish use its tail for?

to push it
to swim
to flip
to swish
etc.

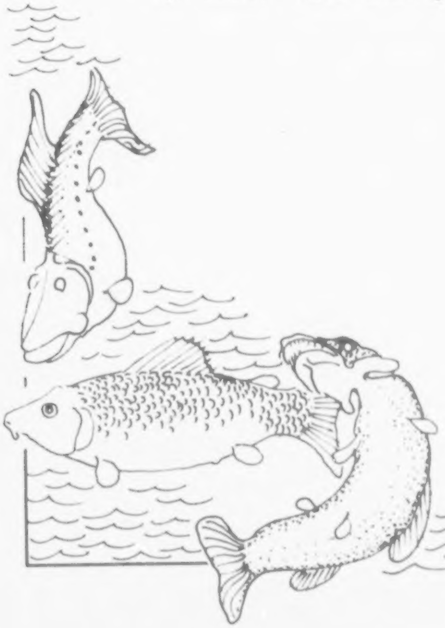
Here is an example that was written by an N.W.T. student, Irma Clark.

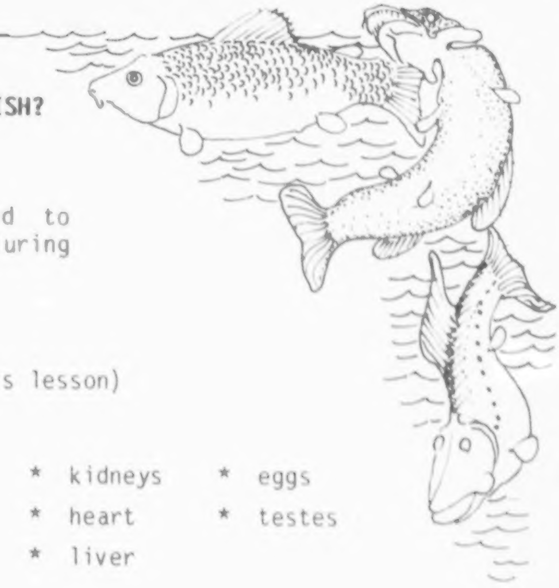
I use my fins to steer, steer, steer.
I use my mouth to bite.
I use my ears to hear, hear, hear.
I use my teeth to fight.

I use my scales to flick, flick, flick.
I use my eyes to see.
I use my tongue to lick, lick, lick
I use my food for me.

5. Paste photographs or illustrations of fish onto construction paper and cut into shapes to make jigsaw puzzles.

6. Have students measure the length (e.g., fork length) and weight of a variety of fish. Have them graph the results.





LESSON: **WHAT'S INSIDE A FISH?**

As this lesson emphasizes language related to science concepts, you may wish to teach it during your Science period.

English Vocabulary (* actually developed in this lesson)

- * spinal cord
- * backbone
- * brain
- * gills
- * swim bladder
- * stomach
- * kidneys
- * heart
- * liver
- * eggs
- * testes

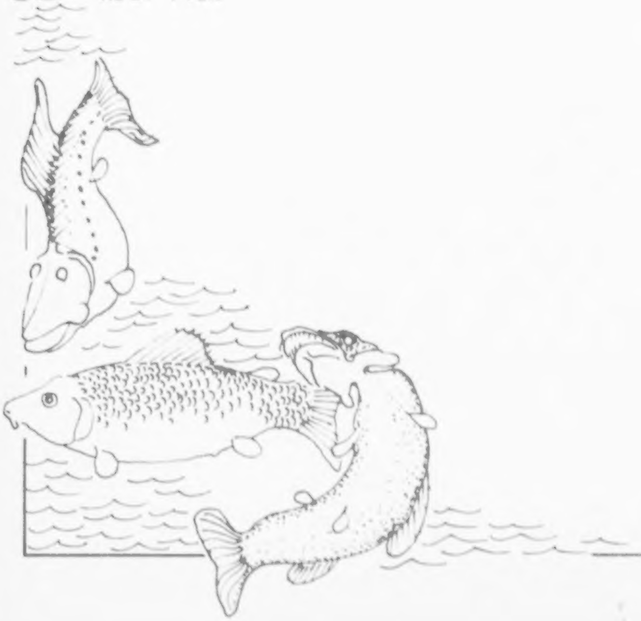
English Sentence Patterns (* actually developed in this lesson)

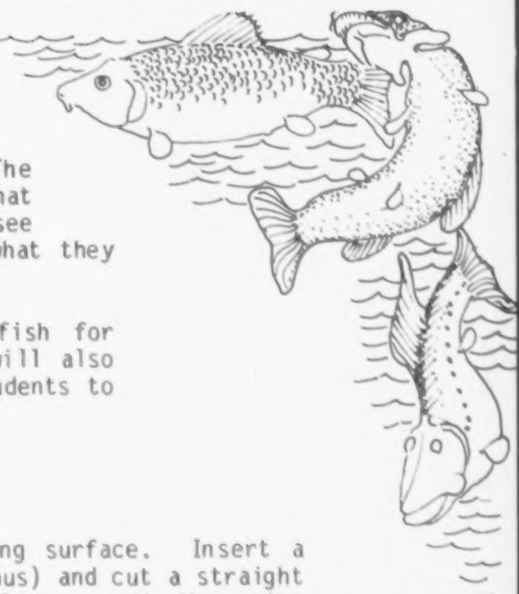
Why do fish have __________?
Fish have __________ to __________.

What's inside a fish?
Inside a fish there is/are __________.

Special Materials Required

Real fish





Concept Development/Language Exposure

1. a) Use the fish from the previous lesson (The Outside of a Fish). Tell students that you are going to cut open the fish to see what is inside. Ask them to predict what they might find. Record these predictions.

   b) Note: Ideally you should have one fish for every 4-5 students. This means you will also need some adult volunteers or older students to help in dissecting the fish.

Dissection Procedure:

i) Place the fish on a flat cutting surface. Insert a knife or scalpel in the vent (anus) and cut a straight line forward up the belly until you reach the point where the gill covers almost meet. Lay open the body cavity so that you can examine the internal structures and organs.

ii) Locate the heart near the front of the incision. Explain that the heart works to move blood through the fish's body (just as a human heart moves blood through our bodies).

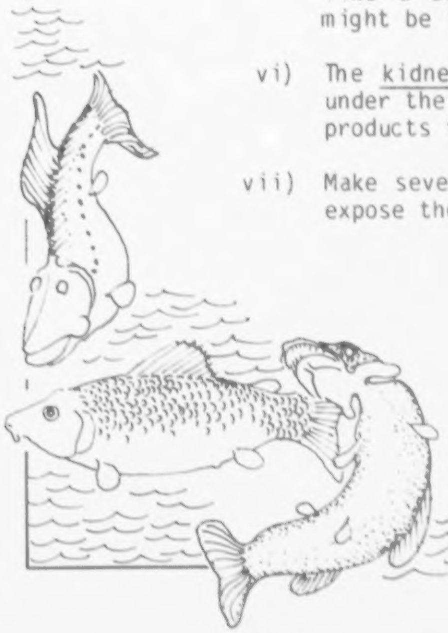
iii) The liver may be found just behind the heart. It stores blood and removes any poisons from the blood.

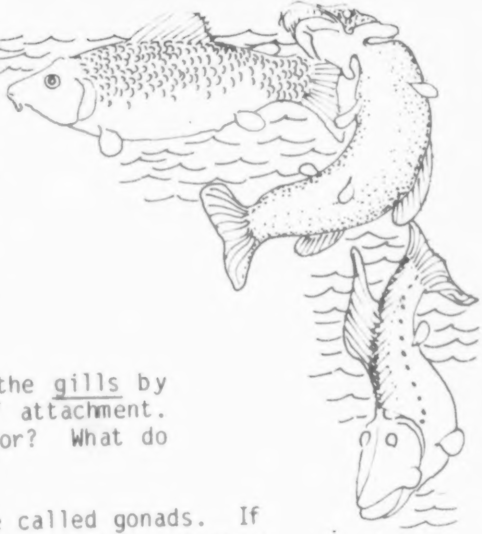
iv) Remove the entire digestive system and lay it out in a pan for better visibility. Point out the tube (esophagus) that carries food from the fish's mouth to its stomach. Cut open the stomach to see if you can determine what the fish ate.

v) The swim bladder is an elongated sac that usually lies high in the body cavity. If the fish is fresh it may be still expanded, like a small balloon. Ask students why they think this organ might be important. (Helps fish to maintain buoyancy.)

vi) The kidneys (two) are long, slender, dark organs that lie just under the vertebrae and above the gas bladder. They remove waste products from the body just as our kidneys do.

vii) Make several lengthwise parallel cuts behind the fish's eyes to expose the brain. Why does a fish need a brain?





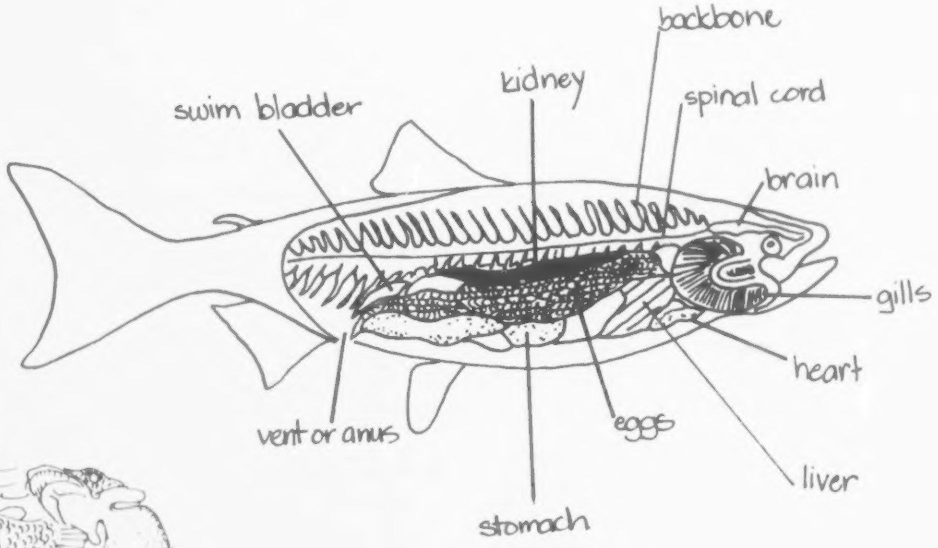
viii) Cut through the centre of the column of vertebrae exposed in the body cavity to locate the spinal cord. It carries messages from the brain to other parts of the body. The backbone protects the spinal cord and provides support for the fish. What would happen if fish/people didn't have backbones?

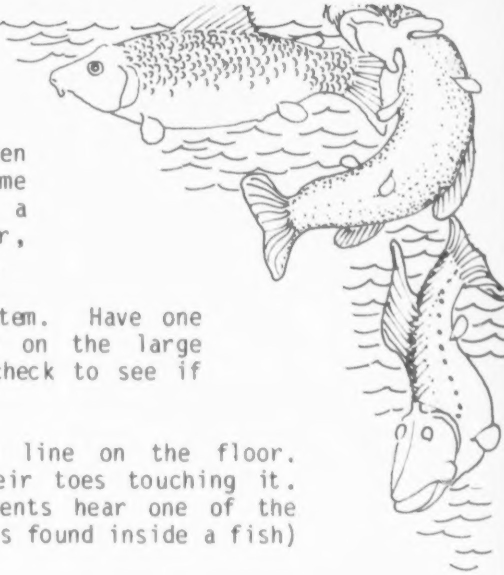
ix) Raise the gill covers and remove the gills by severing them at the two points of attachment. What does the fish use its gills for? What do people have instead of gills? Why?

x) The reproductive organs of fish are called gonads. If your fish is female, they are called ovaries and they produce eggs. If your fish has eggs remove them and allow students to handle them. What shape/size/colour are they? How many (estimate) do you think there are?

xi) The reproductive organs of the male are called testes. They are located in the posterior part of the body cavity above the digestive organs. The opening for the gonads (reproductive organs of the fish) is just behind the anal opening. The testes discharges milt onto the eggs. Milt is a fluid containing the sperm.

2. Make a large illustration showing the internal structures and organs of a fish. Review the vocabulary items as you indicate each on the illustration.





Language Practice

L 1. Key Word/Phrase: Tell students to listen for a particular word/phrase. Each time they hear it (in a list of words or a short story) they make a mark on a paper, clap their hands, stamp their feet, etc.

L 2. Which Part?: Call out a vocabulary item. Have one student indicate the appropriate part on the large illustration (CD #2). Other students check to see if s/he is correct.

L 3. Hop the Line: Make a masking tape line on the floor. Students stand along the line with their toes touching it. Call out a list of words. When students hear one of the vocabulary items (i.e., something that is found inside a fish) they "swim" across the line.

L/S 4. Gossip: Whisper one of the vocabulary items to the first student. That student then whispers it to the next student and so on until it has been whispered to all the students. The last student repeats the word aloud and indicates the correct organ/structure on the large illustration.

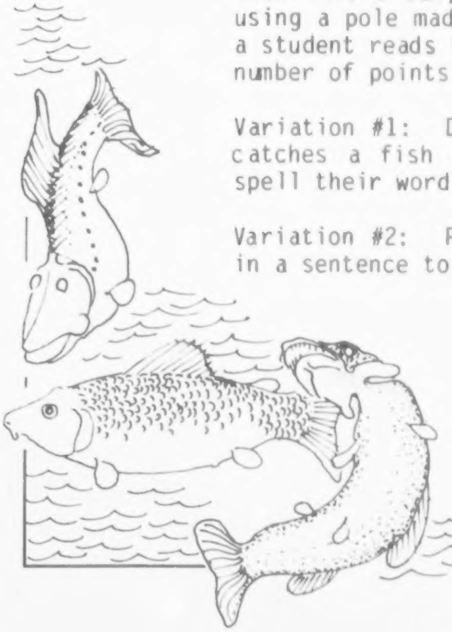
S 5. Chant: Assign one of the vocabulary items to each student. (Several students will have the same words.) Students sit in a circle. Start a rhythm: clap, clap, snap, snap. One student calls his word and that of someone else: e.g., "stomach, stomach, gills, gills." The person called must pick up the chant, saying his word and someone else's without breaking the rhythm: e.g., "gills, gills, liver, liver."

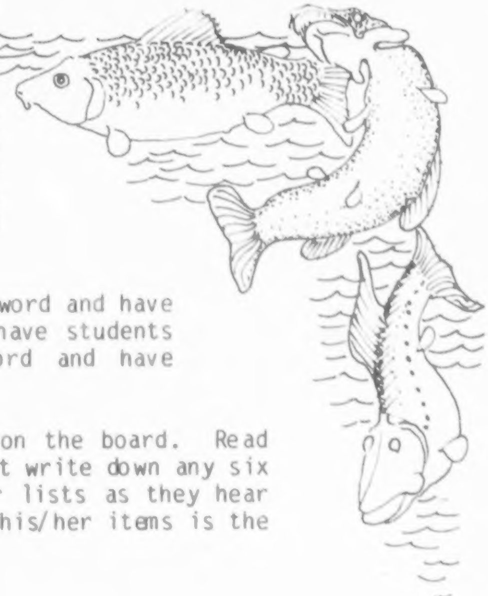
R 6. Labels: Attach labels to the various parts on the large illustration with lengths of yarn.

R 7. Fish Pond: Write vocabulary items on paper fish. On the other side of each fish write a numeral. Attach a paper clip to each fish. Put the fish into a box, "the sea." Students take turns trying to catch fish using a pole made from a yardstick, a piece of string and a magnet. If a student reads the word on his/her fish correctly, s/he receives the number of points indicated on the back of that fish.

Variation #1: Divide class into 2 teams. One student from each team catches a fish and reads the word to their team. The first team to spell their word correctly receives the points indicated.

Variation #2: Play as Variation #1. Team must use the word correctly in a sentence to gain points.





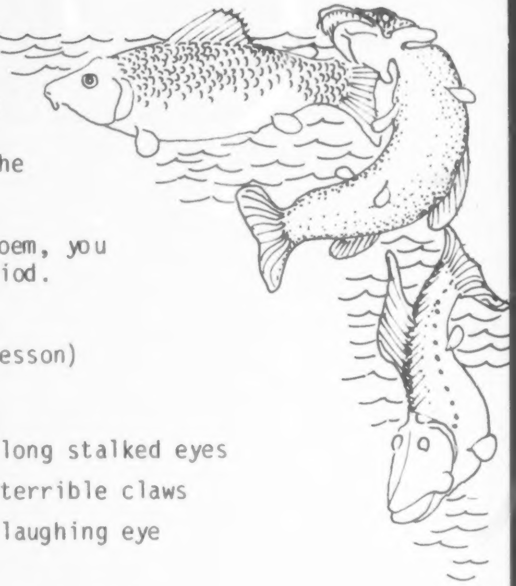
R 8. Wax Resist: Paint the vocabulary words on a large fish shaped sheet of paper (mural paper) with wax. Using a puppet, tell the story. As you say one of the vocabulary items, paint over it with dark coloured paint and it will "magically" appear.

Read the words with students. Point to a word and have students read it. Point to a word and have students use it in a sentence. Call out a word and have students point to it.

R/W 9. Word Bingo: Write the vocabulary items on the board. Read them over with students. Have each student write down any six items. Students cross out items on their lists as they hear them. The first student to cross out all his/her items is the winner.

Application

1. Compare the illustration of the internal organs and structures of a fish to one of a human body. How are they similar? How are they different?



LESSON: **THE FISH WITH THE DEEP SEA SMILE**

(Thanks to Paula Stein who developed many of the activity ideas for this lesson.)

As this lesson emphasizes language related to a poem, you may wish to teach it during your Language Arts period.

English Vocabulary (* actually developed in this lesson)

* blue green eyes
* whiskers three
* electric lights
* deep sea smile
* terrible teeth
* long strong jaws
* long stalked eyes
* terrible claws
* laughing eye

English Sentence Patterns (* actually developed in this lesson)

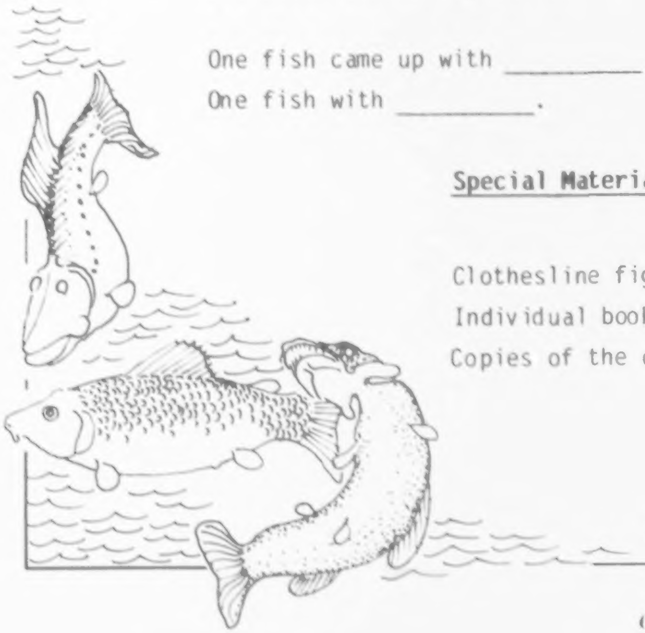
* They fished and they fished
Way down in the sea.
Down in the sea a mile
They fished among all the fish in the sea
For the fish with the deep sea smile.

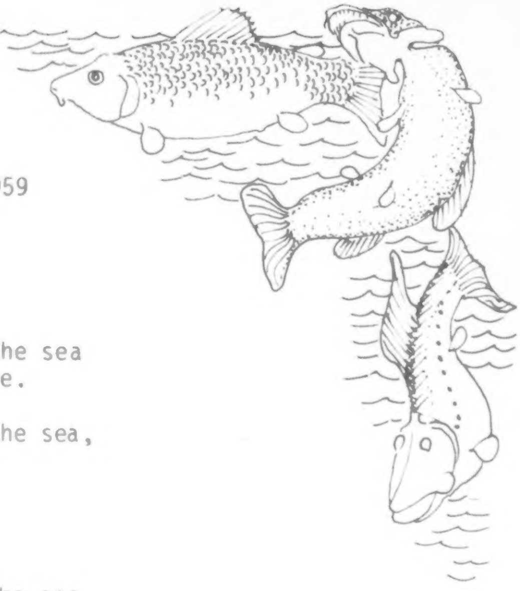
One fish came up from the deep of the sea
From down in the sea a mile,
____
But never a deep sea smile.

One fish came up with __________
One fish with __________.

Special Materials Required

Clothesline figures
Individual booklets
Copies of the clothesline figures on stencils





The Fish With The Deep Sea Smile

From: Nibble, Nibble
By Margaret Wise Brown
Addison-Wesley Publishing Company, 1959

They fished and they fished
Way down in the sea,
Down in the sea a mile,
They fished among all the fish in the sea
for the fish with the deep sea smile.

One fish came up from the deep of the sea,
From down in the sea a mile,
It had blue-green eyes
And whiskers three
But never a deep sea smile.

One fish came up from the deep of the sea,
From down in the sea a mile,
With electric lights up and down his tail
But never a deep sea smile.

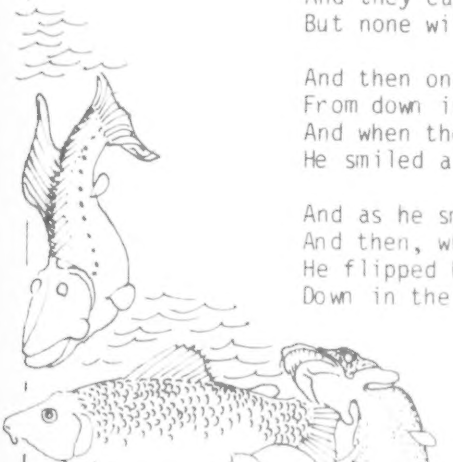
They fished and they fished
Way down in the sea,
Down in the sea a mile,
They fished among all the fish of the sea
For the fish with the deep sea smile.

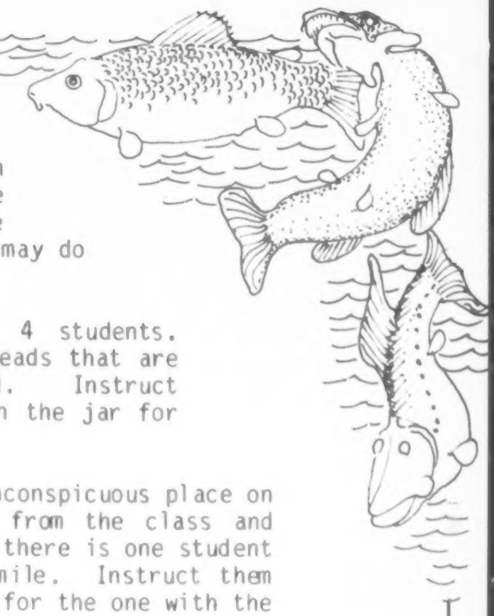
One fish came up with terrible teeth,
One fish with long strong jaws,
One fish came up with long stalked eyes,
One fish with terrible claws.

They fished all through the ocean deep
For many and many a mile,
And they caught a fish with a laughing eye
But none with a deep sea smile.

And then one day they got a pull
From down in the sea a mile,
And when they pulled the fish into the boat
He smiled a deep sea smile.

And as he smiled, the hook got free
And then, what a deep sea smile!
He flipped his tail and swam away
Down in the sea a mile.





Concept Development/Language Exposure

1. Tell the students that they are going to learn a poem that tells about some fishermen who are looking for a very special fish among all the fish in the sea. To develop this concept you may do one of these activities:

   a) Divide the class into groups of 3 or 4 students. Provide each group with a container of beads that are the same colour, except for one bead. Instruct students to search among all the beads in the jar for the one of a different colour.

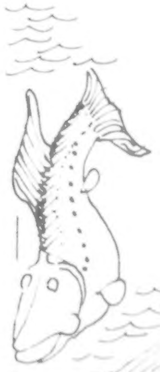
   b) Pin a small disc, a smiling face, in an inconspicuous place on one student. Do this privately - away from the class and without their knowledge. Tell class that there is one student in the room with a "name of community" smile. Instruct them to search among all the kids in the class for the one with the "__________ smile."

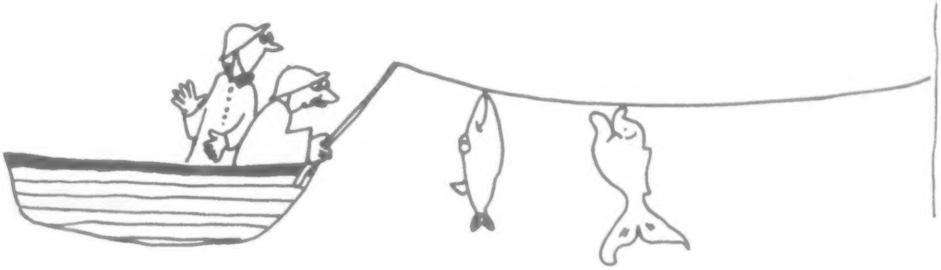
2. a) Recite the first verse of the poem:

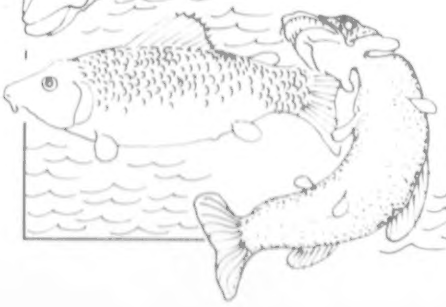
   "They fished and they fished
   Way down in the sea,
   Down in the sea a mile,
   They fished among all the fish in the sea
   For the fish with the deep sea smile."

   Ask students to pretend they are fish and think about things that might make them smile. Elicit some of these ideas and record them on a chart.

   b) Place fish figures (in the order you will need them) in a box painted to look like the sea. Hang the fisherman at one end of the clothesline (their fishing line). As you recite the poem, hang the appropriate fish on the line.

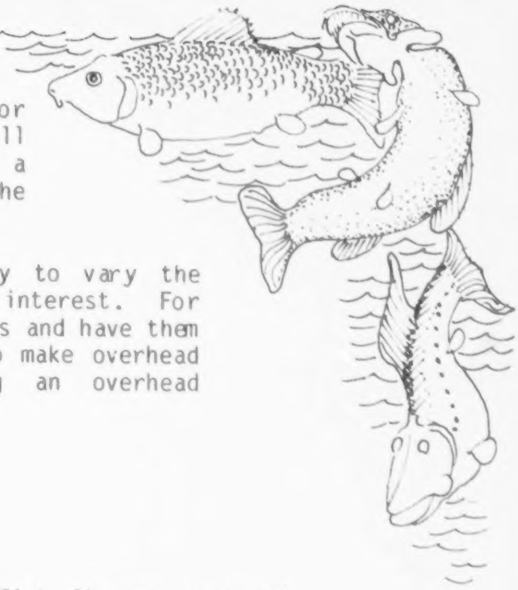






   c) Ask questions about the poem:

   "What did the fisherman want to catch? Why?
   What kinds of fish did they catch?
   Did they finally catch the fish they wanted?
   What happened to that fish?
   What made the fish smile a deep sea smile?"



3. Examine and discuss the fish caught. For example: "laughing eye" is an idiom and will require explanation; "whiskers three" is a change of a usual word order - discuss why the author wrote it in this way.

4. Recite the poem again several times. Try to vary the presentation in some way to hold students' interest. For example, you could distribute fish to students and have them hang the fish on the line. You could also make overhead transparencies and tell the story using an overhead projector.

Language Practice

L 1. a) Which Fish?: Make copies of the fish figures, one set for each student. Make statements about the fish in the poem and have students hold up the appropriate figures.

For example: "They fished among all the fish in the sea.
One fish came up with terrible teeth."

b) Recite the entire poem. Students hold up the fish figures as you mention them.

L 2. Fishing: Have students listen for a specified phrase. When they hear it they pretend to be fishermen. For example: "Listen for 'They caught a fish with a laughing eye.'"

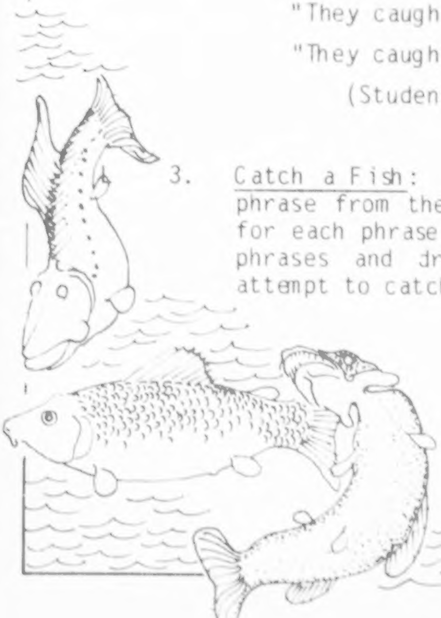
"They caught a fish with a laughing mouth."

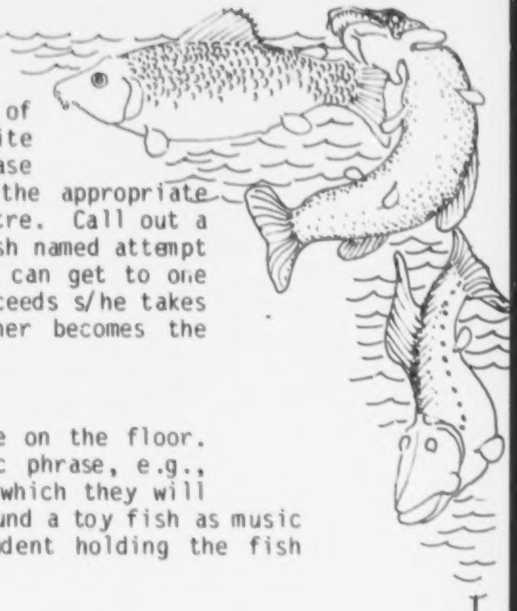
"They caught a fish with a crying eye."

"They caught a fish with a laughing eye."

(Students pretend to fish.)

3. Catch a Fish: Have students stand in circle. Assign each student a phrase from the poem. Make sure that there are at least two students for each phrase. Stand in the centre of the circle, repeat one of the phrases and drop a paper fish. The students assigned that phrase attempt to catch the fish before it touches the floor.





L 4. Middle Man: Place two sets of pictures of the fish on the floor in lines opposite each other. Assign each student a phrase from the poem and have them stand on the appropriate picture. One student stands in the centre. Call out a phrase; the students standing on the fish named attempt to change places before the middle man can get to one of their places. If the middle man succeeds s/he takes over the picture and the unlucky runner becomes the middle man.

L/S 5. Hot Potato: Seat students in a circle on the floor. Instruct them to listen for a specific phrase, e.g., 'One fish came up with terrible teeth', which they will have to repeat. Have students pass around a toy fish as music plays. When the music stops, the student holding the fish repeats the phrase.

L/S 6. Oral Cloze: Recite the poem omitting key words or phrases. Students provide these orally. Provide visual clues the first time you do the activity, then try it without using the pictures.

S 6. Flashlight Fishing: Place pictures of the fish on the walls around the classroom. Shine a flashlight on one of the fish and have students make an appropriate statement.

S 7. Choral Speaking: Practice chanting the poem in a variety of ways. For example: The whole class chants the chorus; individuals chant statements about the fish.

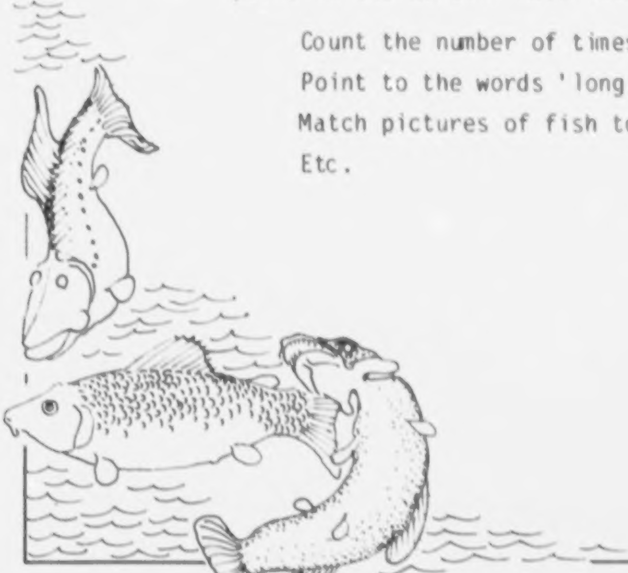
S/R 8. Chart: Write the poem on chart paper. As students chant the poem, point to the words. Have students do various activities with the chart:

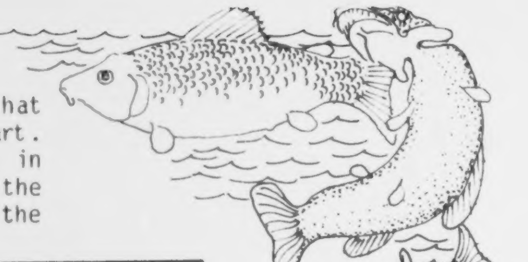
Count the number of times the word fish appears.

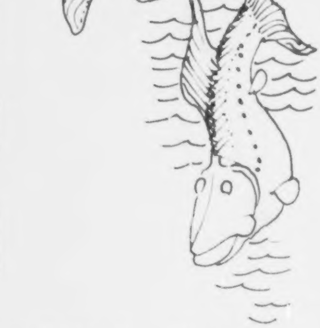
Point to the words 'long stalked eyes,' 'terrible claws', etc.

Match pictures of fish to appropriate lines.

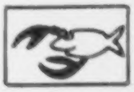
Etc.



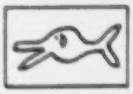




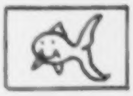
R 9. Pocket Chart: Place sentence strips that describe the fish in the pocket chart. Distribute fish pictures. Students, in turn, match their pictures to the appropriate strips and read the statements.



One fish came up with terrible claws.



One fish came up with long strong jaws.



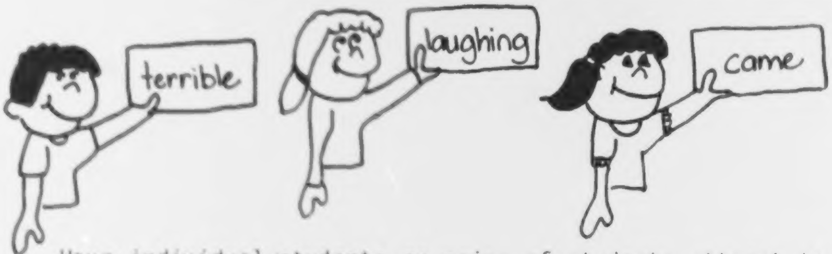
one fish came up with a laughing eye.

R 10. Sentence Strips: Distribute sentence strips from #9 to students. Have each cut out one word and give it to a student who didn't get a sentence strip. Teacher calls out one of the sentences. The student holding the appropriate strip places it in the pocket chart, leaving space for the missing word. Have students holding the missing words place their card in the appropriate statement, then read it to the class:

One fish came up with ☐ claws.

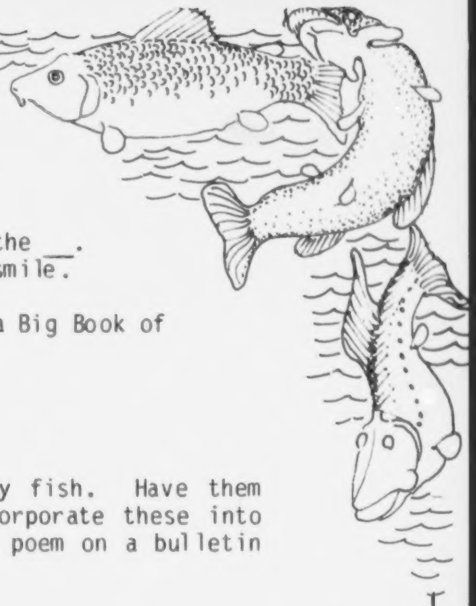
One fish ☐ up with long strong jaws.

One fish came up with a ☐ eye.



Have individual students or pairs of students attempt to read the chart to you. (Volunteers only.)

W 11. Books: Make individual booklets using the cloze technique. Students fill in the missing words, then illustrate each page. Be sure that the chart story is available as a model.



For example:

Page one: They fished and they _________
Way down in _________ sea,
_______ in the _______ a mile,
They __ among all the __ __ in the __.
For a ___ with a deep ___ ___ smile.

W 12. Big Book: Some students may wish to make a Big Book of the poem.

Application

1. Have students draw some other weird and wacky fish. Have them think of phrases to describe their fish. Incorporate these into the poem. Use the pictures to illustrate the poem on a bulletin board.

2. Use the pattern to make original poems.

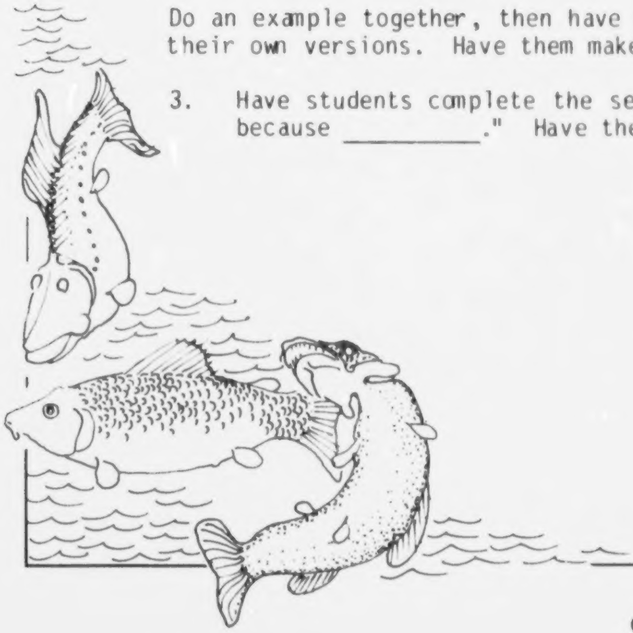
e.g., They fished and they fished
trapped
hunted
shopped
etc.

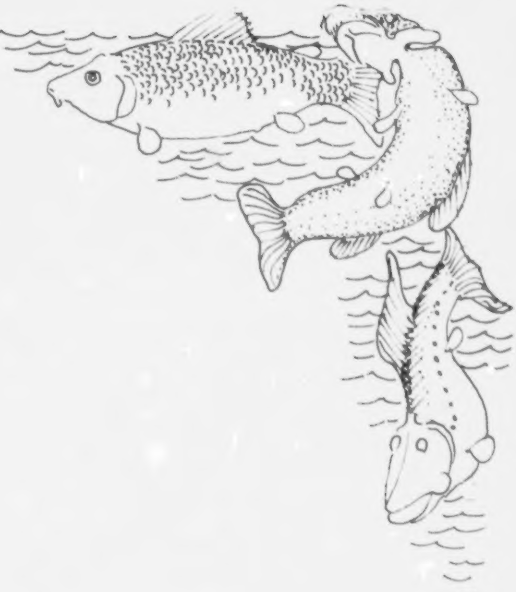
Way down in the sea
out on the land
out in the bush
down at the Bay
etc.

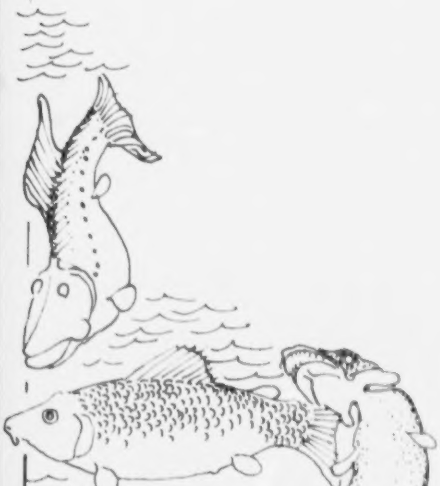
Etc.

Do an example together, then have pairs or small groups of students work on their own versions. Have them make books, T.V. stories, etc. of their poems.

3. Have students complete the sentence, "The fish smiled a deep sea smile because _________." Have them illustrate their sentences.







Science/Social Studies

1. Classify objects that float/sink. What is similar about the things that float? How are they different from the things that sink?
2. *2. Make a list of things that fish require in order to live. Make a similar list for people. Compare the lists.
3. Find out which fish live in oceans, which in rivers and lakes.
4. Find out which fish live on the botton of the ocean/lake/river, which on the surface.
5. Find out how to catch fish in different locations.
6. Find out where the great fishing areas of N.W.T., Canada, the World are found.
7. Prepare an aquarium. What does it need? How does it compare with the natural habitat?

Teacher's Notes

These are possible activity ideas for this topic. They can be used in lessons you make up, as enrichment activities, or as learning centre activities. Most can be done in any language. Activities with an * are actually used in the sample lessons which follow. Spaces have been left for you to record your own activity ideas.

ACTIVITY IDEAS

TOPIC C: WHERE FISH LIVE

Math

Language Arts

1. Make up new verses for the poem "Way Down Deep." Brainstorm a list of fish and other animals that live in water, and a list of other things found in rivers, lakes, streams and oceans (cattails, pebbles, etc.)
2. Pretend you are a fish. Brainstorm words that describe your home.
3. Compose nonsense rhymes, jokes and riddles about fish habitats.
4. Write a story "A Visit to the Fish Kingdom" or play.

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Music, Poems, Stories

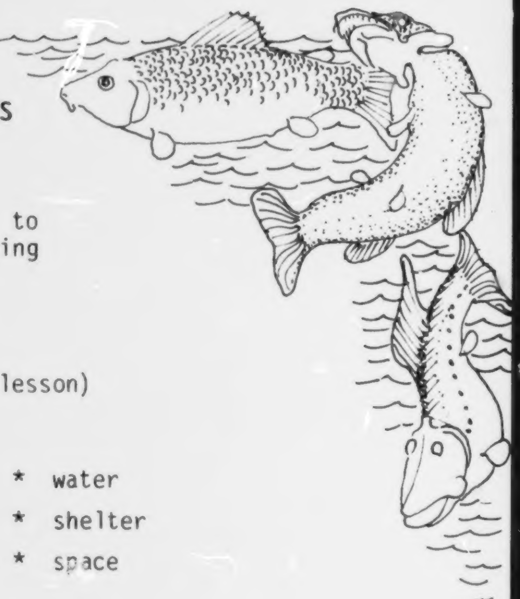
1. "Way Down Deep"
2. Find music which could accompany the story or play "A Visit to the Fish Kingdom" (see Language Arts [4]).

Art

1. Make torn tissue paper fish brushed on white paper with diluted glue. Overlap strips of blue and green tissue for underwater details.
2. Make a mural. Paint background first in blue-green colours. When dry (paint) wallpaper paste along the bottom about 1/3 of the way up the mural. Sprinkle with sand. Cut water weeds out of material or construction paper or use real weeds collected from lake or river. Paste on. Then draw or paint large colourful fish, cut out and paste on the mural.

Physical Education/Movement

Special Activities



LESSON: **FISH HABITATS**

As this lesson emphasizes language related to science concepts, you may wish to teach it during your Science period.

English Vocabulary (* actually developed in this lesson)

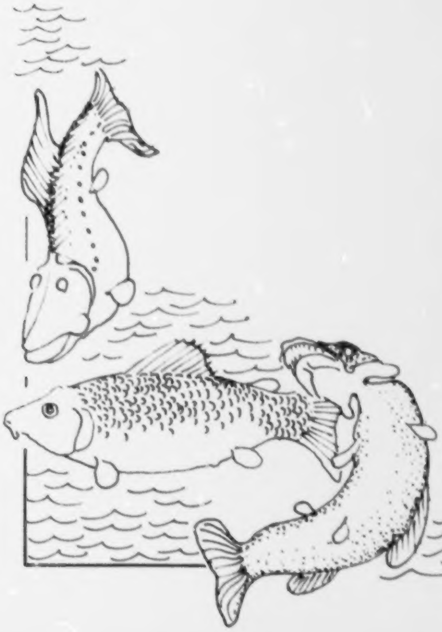
- * habitat/s
- * provide/s
- * food
- * air
- * water
- * shelter
- * space

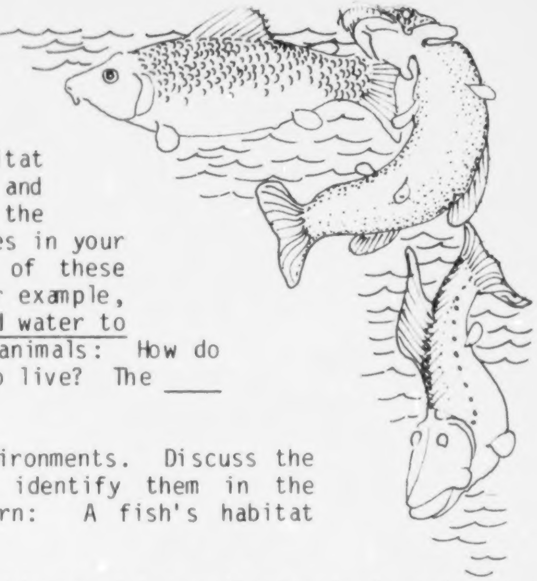
English Sentence Pattern (* actually developed in this lesson)

The __________ provides __________ with __________. (Exposure only.)
* A fish's habitat provides it with __________.

Special Materials Required

Pictures of fish in their environments
Worksheet





Concept Development/Language Exposure

1. Review the concept of habitat: our habitat provides us with food, water, air, space and shelter. (Make sure students understand the terms space and shelter.) Discuss the places in your neighbourhood/community that provide each of these essentials using the sentence pattern. (For example, the river provides us with fish for food and water to drink.) Talk about the habitats of other animals: How do they provide the things that animals need to live? The ____ provides caribou with ________ .

2. a) Look at pictures of fish in their environments. Discuss the things that fish need to live and identify them in the pictures. Model the sentence pattern: A fish's habitat provides it with _________.

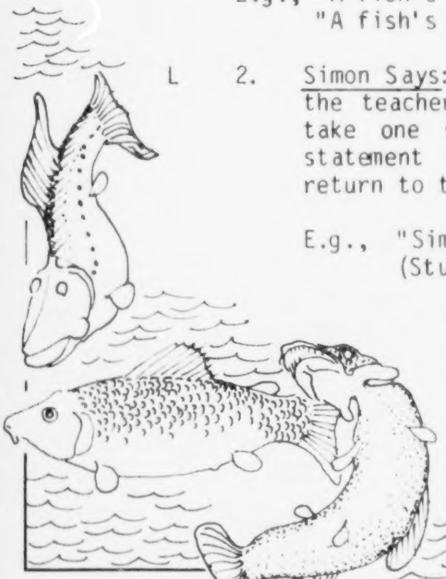
   b) Discuss the similarities between the habitats of humans/land animals and fish. Emphasize that although the homes are very different, they all provide the things that the people/animals need in order to survive.

3. Look at photographs (from outdoor magazines) of various species of fish in their habitats. What is the same about the habitats? (All the fish live underwater.) What is different? (Some fish live in saltwater, some in freshwater; some live in weedy areas, some in rocky areas; etc.) Why do different fish live in different areas? (They eat different foods, need different types of shelter; some fish cannot live in saltwater, some fish require clear water, etc.)

Language Practice

L 1. True/False: Make statements using the sentence pattern. Students hold up paper fish every time they hear a true statement.

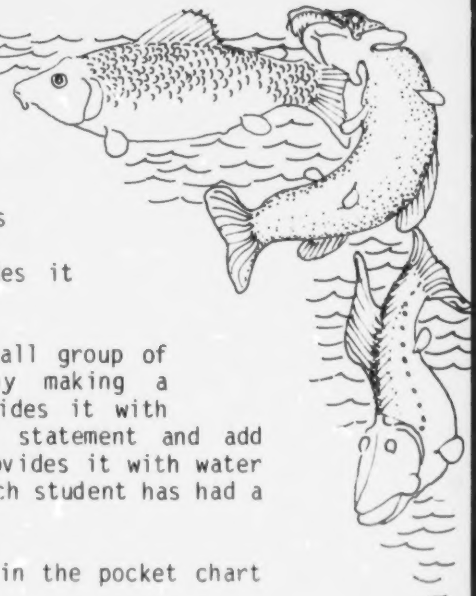
E.g., "A fish's habitat provides it with shelter." (T)
"A fish's habitat provides it with a house." (F)



L 2. Simon Says: Students stand in a line at one end of the room. If the teacher makes a statement preceded by "Simon Says," they may take one step forward. If "Simon Says" does not precede the statement they must remain still; anyone who takes a step must return to the start.

E.g., "Simon says a fish's habitat provides it with air." (Students take a step.)

"A fish's habitat provides it with water." (Students stand still.)



L/S 3. Substitution Drill: Make a statement, then provide a word/phrase for students to substitute. For example:

E.g., Teacher: "A fish's habitat provides it with water. Air."
Students: "A fish's habitat provides it with air."

L/S 4. Cumulative Chain Drill: Teacher and a small group of students sit in a circle. Begin by making a statement. E.g., "A fish's habitat provides it with water." First student must repeat the statement and add another item. E.g., "A fish's habitat provides it with water and food." Continue around circle until each student has had a turn.

S/R 5. Sentence Strips: Place a sentence strip in the pocket chart as shown.

A fish's habitat provides it with ________.

Have students tell you what words could go in the blank. Write each word on a card. Place each card, in turn, in the blank and have students read the completed statement.

R. 6. Sentence Hunt: Make several sets of sentence strips:

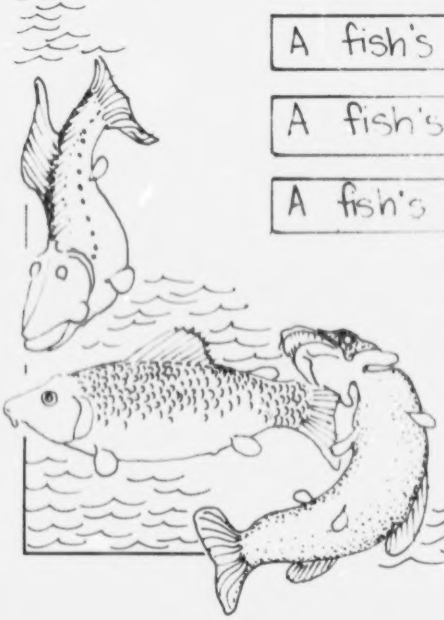
A fish's habitat provides it with shelter

A fish's habitat provides it with food.

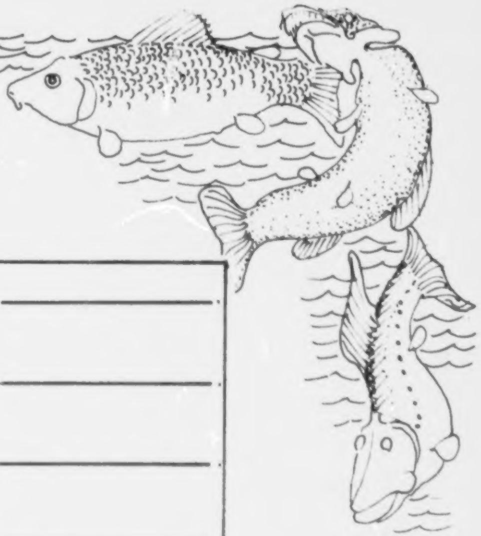
A fish's habitat provides it with water

A fish's habitat provides it with space.

A fish's habitat provides it with air.



Hide one set of strips around the classroom. Distribute other sentence strips to students. Students hunt for their matching sentences. Upon finding them, students read their sentences aloud.



R/W 8. Vanishing Drill: Use the vanishing technique to make a worksheet for students to complete.

A fish's habitat provides it with ______

___ fish's habitat ______ it with ______

___ ___ habitat ______ it with ______

___ ___ ______ ______ it ___ ______

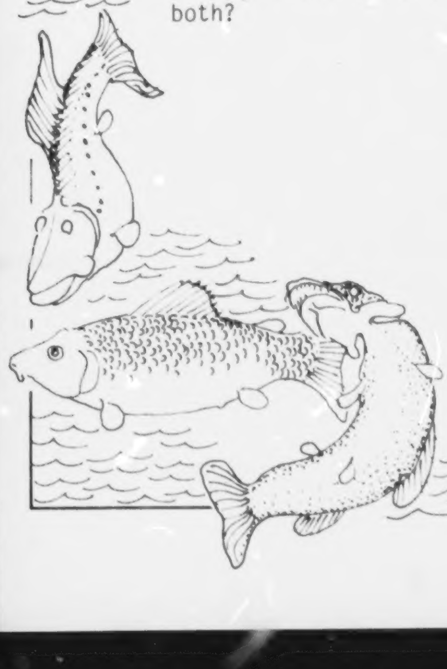
___ ___ ______ ______ ___ ___ ______

air house shelter milk blankets
clothes space water food ice cream

Application

1. Divide class into groups. Assign one local fish species to each group. They must find out what type of habitat their fish prefers, then show the fish in its habitat (mural, peepbox.).

2. Introduce the concepts of saltwater and freshwater. If you live in a coastal community, collect one water sample from the ocean and another from a lake or river. If saltwater is not available, you will have to approximate it by mixing table salt with water. What fish live in saltwater? freshwater? both?



ACTIVITY IDEAS

TOPIC D: FOOD

Science/Social Studies

1. Buy some commercial fish food and analyse its contents. How does it compare to natural food?
2. Keep watch on the fish in your class aquarium. Chart how often they feed. How do they respond when you give them commercial and/or natural food?
3. Find out more about plankton - what is it? where is it found?
4. Relate availability of food to areas of successful commercial fishing.

Teacher's Notes

These are possible activity ideas for this topic. They can be used in lessons you make up, as enrichment activities, or as learning centre activities. Most can be done in any language. Activities with an * are actually used in the sample lessons which follow. Spaces have been left for you to record your own activity ideas.

Math

1. Solve problems/make chart relating to fish size and amount of food required.

Language Arts

Music, Poems, Stories

*1. Jacky the Jackfish/Charlie the Char
2. "Little Fish"

Art

Physical Education/Movement

1. What Time Is It, Mr. Fish? A safety line is established about 10m from where Mr. Fish is standing. The other students stand behind the safety line and move forward slowly, asking, "What time is it, Mr. Fish?" Mr. Fish answers in various ways (e.g., "It's 3:30." or "It's 5:00.") Students continue to move forward. At some point, Mr. Fish answers the question with "It's mealtime!" and chases the others back to the safety line.

Special Activities

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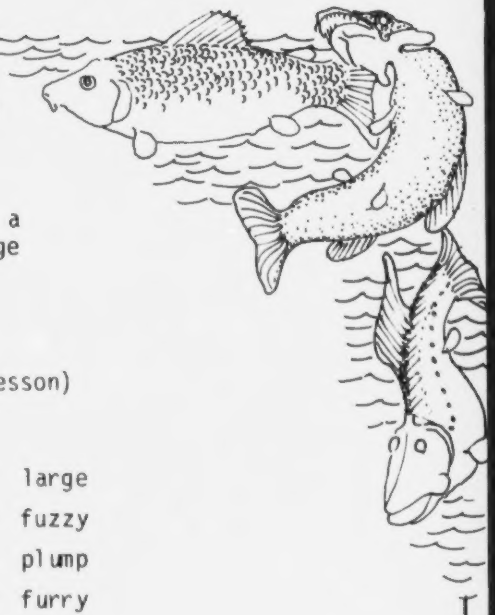


LESSON: **JACKY THE JACKFISH**

As this lesson emphasizes language related to a story, you may wish to teach it during your Language Arts period.

English Vocabulary (* actually developed in this lesson)

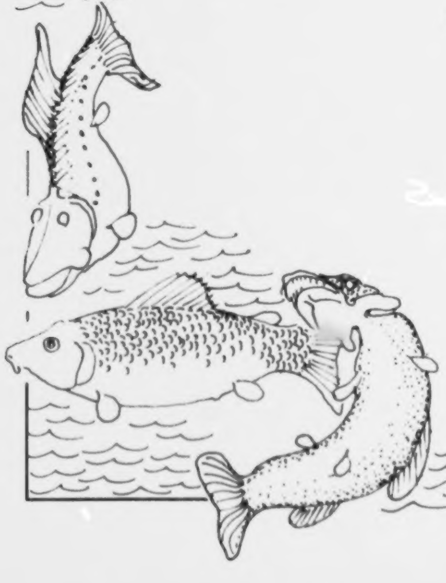
* days of the week
* numbers (one - seven)
* trout
* ducklings
* frogs
* mice
* fish
* leeches
* insects
* large
* fuzzy
* plump
* furry
* small
* juicy
* wriggling

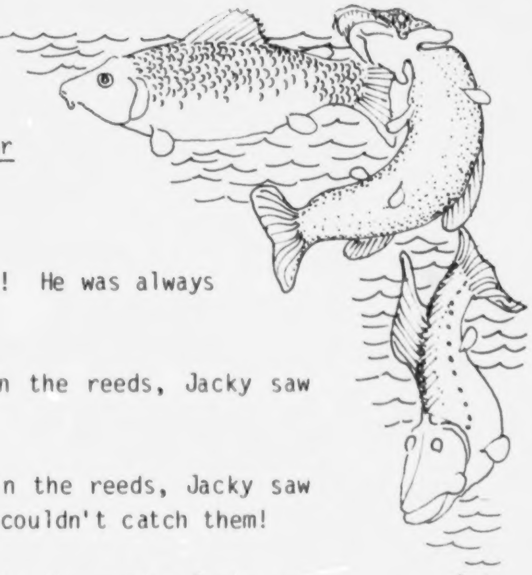
English Sentence Patterns (* actually developed in this lesson)

* One sunny _________ morning, while swimming in the reeds,
Jacky saw _________. But he couldn't catch it/them.

Special Materials Required

Pocket chart cards





Jacky the Jackfish

Based on The Very Hungry Caterpillar
By Eric Carle
Adapted by M. Gilmour

Jacky was a jackfish, a very hungry jackfish! He was always looking for something to eat.

One sunny Monday morning, while swimming in the reeds, Jacky saw one large trout. But he couldn't catch it!

One sunny Tuesday morning, while swimming in the reeds, Jacky saw two fuzzy ducklings and one large trout. But he couldn't catch them!

One sunny Wednesday morning, while swimming in the reeds, Jacky saw three plump frogs, two fuzzy ducklings and one large trout. But he couldn't catch them!

One sunny Thursday morning, while swimming in the reeds, Jacky saw four furry mice, three plump frogs, two fuzzy ducklings and one large trout. But he couldn't catch them!

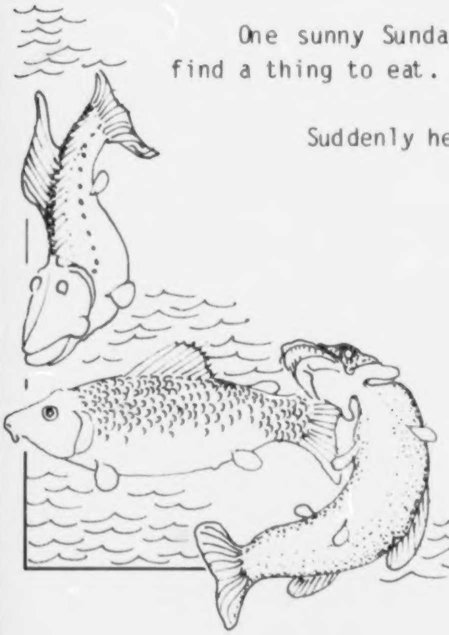
One sunny Friday morning, while swimming in the reeds, Jacky saw five small fish, four furry mice, three plump frogs, two fuzzy ducklings and one large trout. But he couldn't catch them!

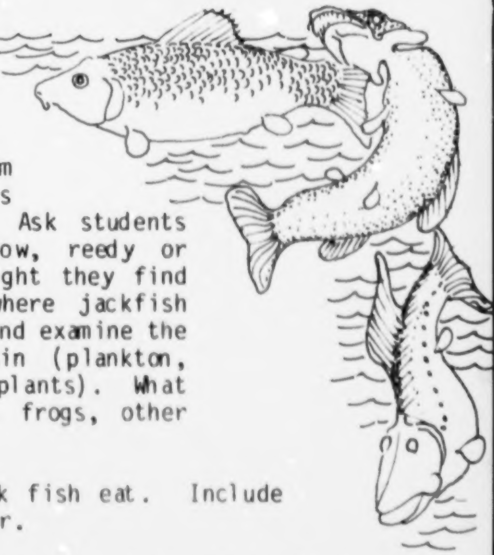
One sunny Saturday morning, while swimming in the reeds, Jacky saw six juicy leeches, five small fish, four furry mice, three plump frogs, two fuzzy ducklings and one large trout. But he couldn't catch them!

One sunny Sunday morning, while swimming in the reeds, Jacky couldn't find a thing to eat. He was getting very hungry!

Suddenly he saw seven wriggling insects,
six juicy leeches,
five small fish,
four furry mice,
three plump frogs,
two fuzzy ducklings,
and one large trout.

And he gobbled them all up!





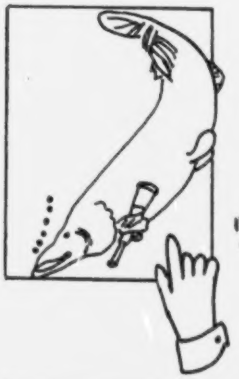
Concept Development/Language Exposure

1. a) Introduce Jacky to students. Tell them that he's a very hungry jackfish who is always looking for something to eat. Ask students where jackfish usually live (in shallow, reedy or swampy areas). What kinds of foods might they find there? If possible, visit an area where jackfish live. Collect buckets of mud and water and examine the different life forms that they contain (plankton, insects, insect larvae, clams, leeches, plants). What other animals live in the area? Ducks, frogs, other fish, muskrats, etc.

   b) Make a list of the things students think fish eat. Include the life forms discovered in the mud/water.

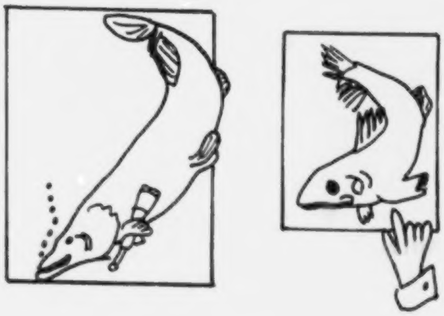
2. a) Tell students that you are going to tell them a story about Jacky the Jackfish. Instruct them to listen carefully for the food that he eats. Place the picture cards in the pocket chart as you tell the story:

①

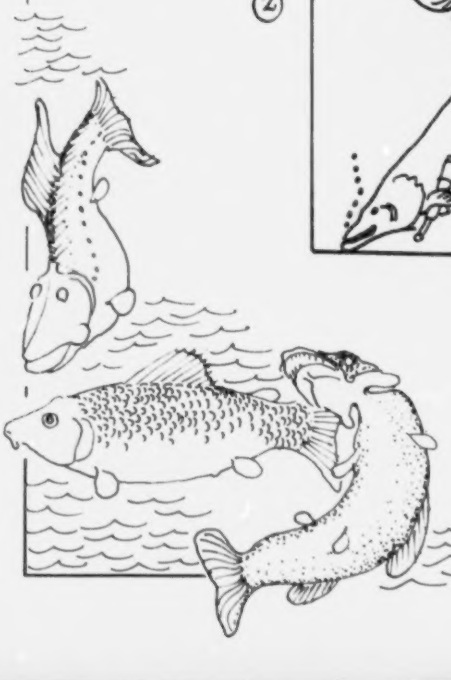


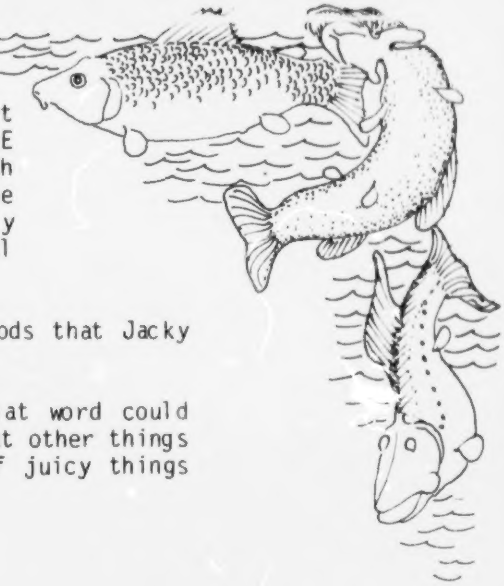
"Jacky was a jackfish..."

②



"One sunny Monday morning..."





b) Compare the list of foods in the pocket chart with the list students made in CD/LE #1b). Are there any differences? Do fish really eat mice, frogs, etc.? Have students find out what else fish really eat. (Invite parents or your local wildlife officer to talk to students.)

3. Talk about the words used to describe the foods that Jacky ate. For example:

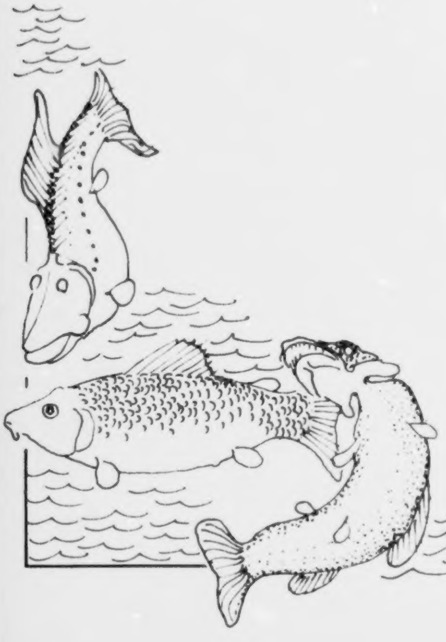
Juicy leeches: "What does 'juicy' mean? What word could you use instead of juicy? What other things are juicy?" Make a chart of juicy things using a frame sentence.

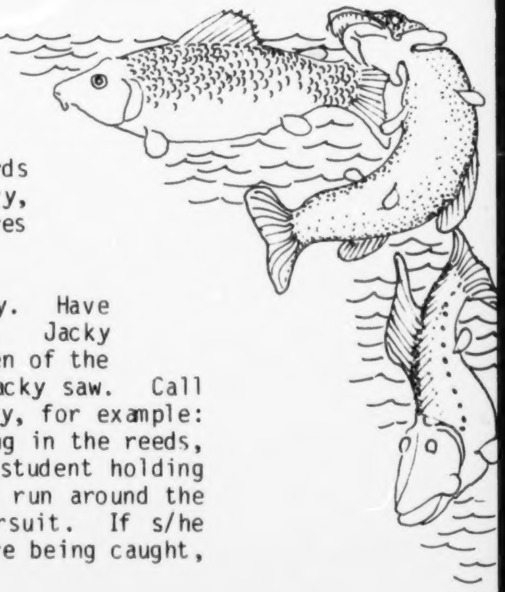
What is juicy?

A plum is juicy.
An orange is juicy.
A grape is juicy.

4. a) Tell the story (with visuals) again. Instruct students to listen carefully to the things Jacky saw each day.

b) Remove the cards from the chart. Ask students, "What did Jacky see on Monday?" Replace the appropriate cards as students answer. Continue until all cards are in place. Review the sequence of the story.





Language Practice

L 1. Which Picture?: Distribute picture cards to students. As you tell the story, students holding the appropriate pictures place them in the pocket chart.

L 2. Jacky: Select one student to be Jacky. Have all other students stand in a circle. Jacky stands outside the circle. Provide seven of the students with the pictures of things Jacky saw. Call out one of the statements from the story, for example: "One sunny Monday morning, while swimming in the reeds, Jacky saw one large lake trout." The student holding the picture of the lake trout begins to run around the outside of the circle with Jacky in pursuit. If s/he does not get back to his/her place before being caught, s/he becomes Jacky.

L 3. Elimination: Students raise their hands when they hear items not mentioned in the story.

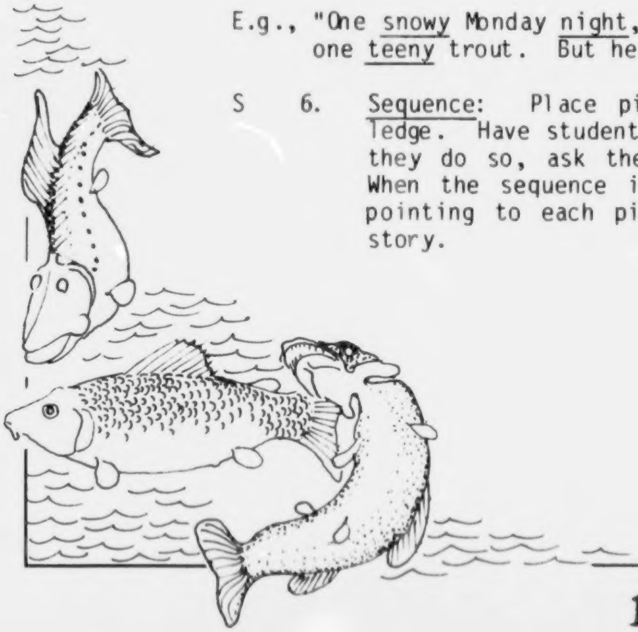
E.g., "Jacky saw: a large trout
fuzzy kittens (Students raise hands.)
plump frogs
ice cream (Students raise hands.)
wriggling insects."
Etc.

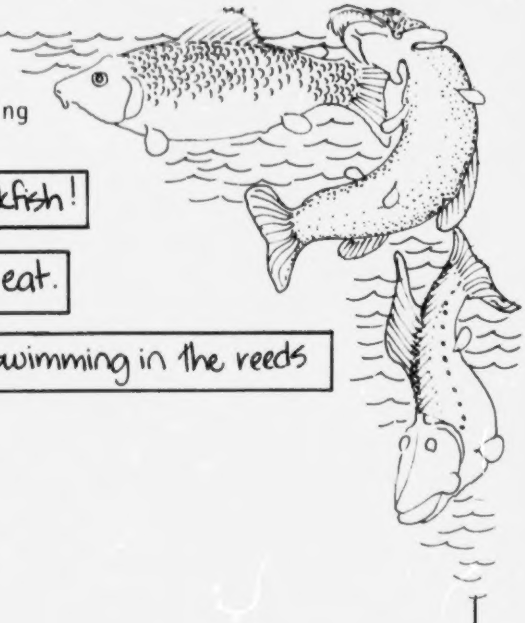
L/S 4. Parrots: Students are parrots and repeat what the teacher says. But they only repeat true statements; if a statement is false, they say nothing.

L/S 5. Catch the Error: Retell the story, substituting other words for the actual vocabulary. Students try to catch the substitutions and provide the correct words.

E.g., "One snowy Monday night, while running in the reeds. Jacky heard one teeny trout. But he couldn't catch it."

S 6. Sequence: Place pictures from the story on the chalkboard ledge. Have students place them in the correct sequence. As they do so, ask them to tell something about the pictures. When the sequence is complete, have them "read" the story, pointing to each picture as they come to that point in the story.





L/R 7. Sentence Strips: Tell the story using sentence strips and pictures:

Jacky was a jackfish | a very hungry jackfish!

He was always looking for something to eat.

One sunny | Monday | morning | while swimming in the reeds

Jacky saw | one large trout.

But he couldn't catch it.

Read again with students as you point to the words. Have individual students read sentences as you point to them.

R/W 8. Big Book: Make a Big Book with students. Have them work in groups, with each group completing one page.

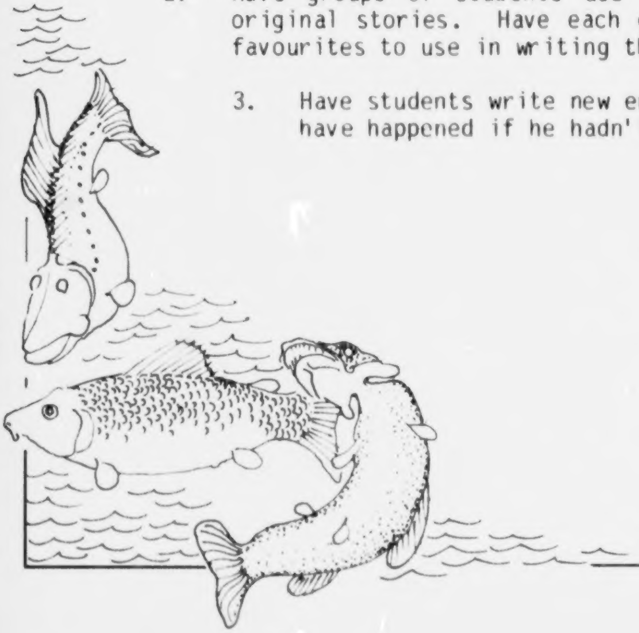
Application

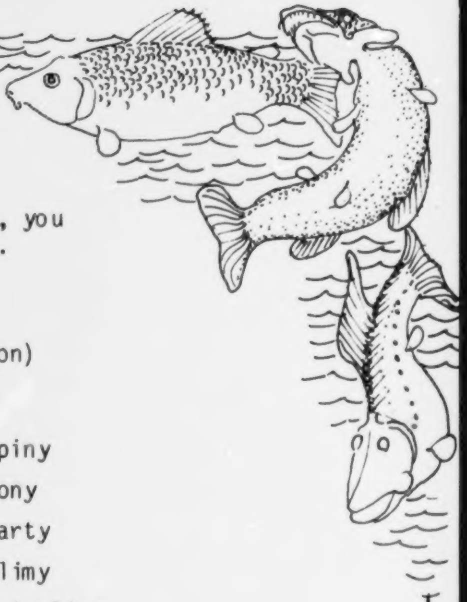
1. a) Find out what foods other species of fish eat. Make a book using the frame sentence, "_________ is food for a _________."

   b) Make scrapbooks of students' favourite foods with pictures cut from magazines. Identify the foods using the sentence, "__________ is food for me."

2. Have groups of students use the model "Jacky the Jackfish" to write original stories. Have each group brainstorm ideas, then choose their favourites to use in writing their stories.

3. Have students write new endings for Jacky the Jackfish. What might have happened if he hadn't gobbled everything up?





LESSON: **CHARLIE THE CHAR**

As this lesson emphasizes language related to a story, you may wish to teach it during your Language Arts period.

English Vocabulary (* actually developed in this lesson)

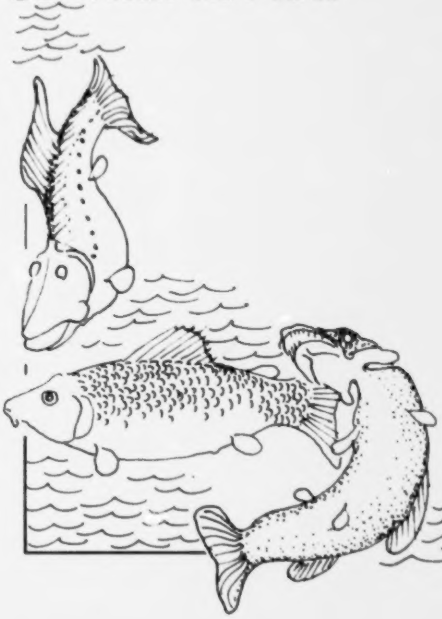
* days of the week
* numbers (one - seven)
* sculpin
* sticklebacks
* lumpfish
* arctic cod
* snails
* insects
* clams
* spiny
* bony
* warty
* slimy
* wriggling
* juicy

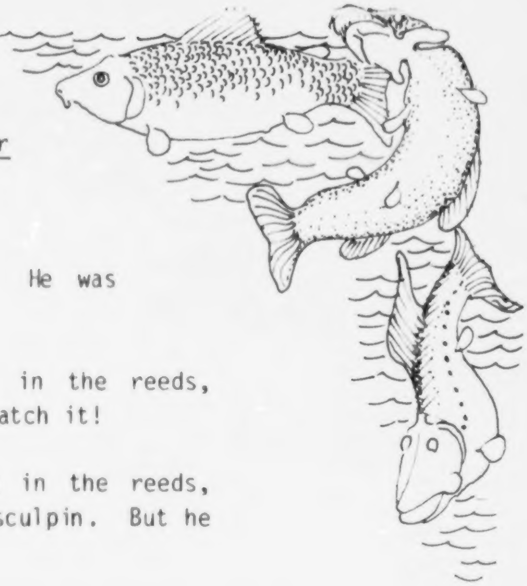
English Sentence Patterns (* actually developed in this lesson)

* One sunny _________ morning, while swimming in the sea, Charlie saw _________. But he couldn't catch it/them.

Special Materials Required

Pocket chart cards





Charlie the Char

Based on The Very Hungry Caterpillar
By Eric Carle
Adapted by M. Gilmour

Charlie was a char, a very hungry char! He was always looking for something to eat.

One sunny Monday morning, while swimming in the reeds, Charlie saw one spiny sculpin. But he couldn't catch it!

One sunny Tuesday morning, while swimming in the reeds, Charlie saw two bony sticklebacks and one spiny sculpin. But he couldn't catch them!

One sunny Wednesday morning, while swimming in the reeds, Charlie saw three warty lumpfish, two bony sticklebacks and one spiny sculpin. But he couldn't catch them!

One sunny Thursday morning, while swimming in the reeds, Charlie saw four arctic cod, three warty lumpfish, two bony sticklebacks and one spiny sculpin. But he couldn't catch them!

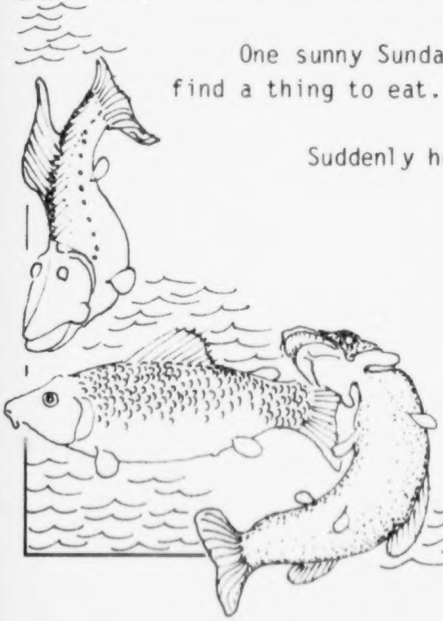
One sunny Friday morning, while swimming in the reeds, Charlie saw five slimy snails, four arctic cod, three warty lumpfish, two bony sticklebacks and one spiny sculpin. But he couldn't catch them!

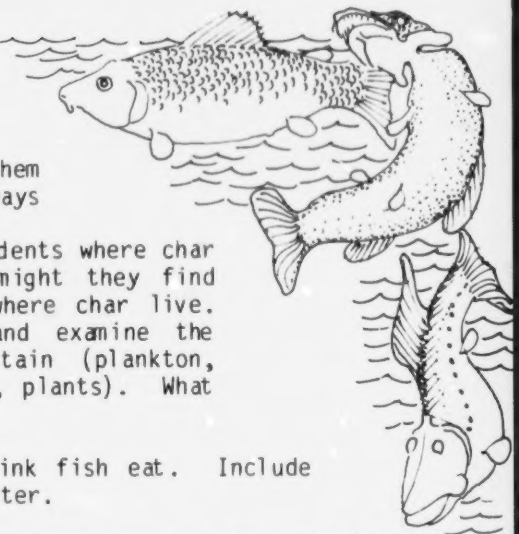
One sunny Saturday morning, while swimming in the reeds, Charlie saw six wriggling insects, five slimy snails, four arctic cod, three warty lumpfish, two bony sticklebacks and one spiny sculpin. But he couldn't catch them!

One sunny Sunday morning, while swimming in the reeds, Charlie couldn't find a thing to eat. He was getting very hungry!

Suddenly he saw seven juicy clams,
six wriggling insects,
five slimy snails,
four arctic cod,
three warty lumpfish,
two bony sticklebacks,
and one spiny sculpin

And he gobbled them all up!



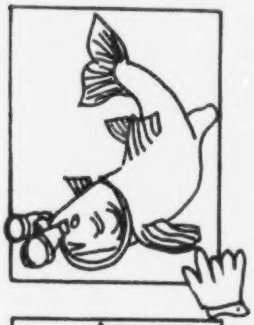


Concept Development/Language Exposure

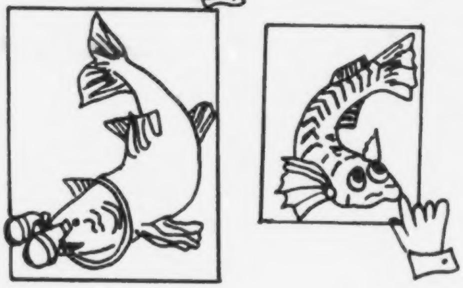
1. Introduce Charlie to students. Tell them that he's a very hungry char who is always looking for something to eat. Ask students where char usually live. What kinds of foods might they find there? If possible, visit an area where char live. Collect buckets of mud and water and examine the different life forms that they contain (plankton, insects, insect larvae, clams, leeches, plants). What other animals live in the area?

   b) Make a list of the things students think fish eat. Include the life forms discovered in the mud/water.

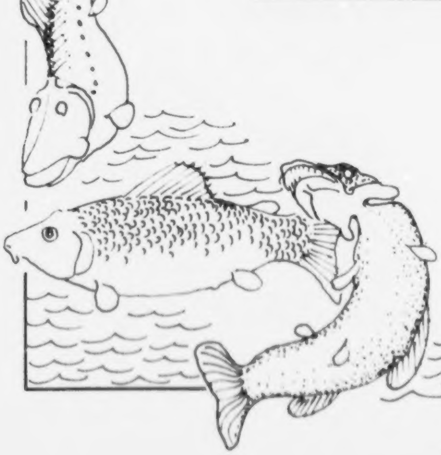
2. a) Tell students that you are going to tell them a story about Charlie the char. Instruct them to listen carefully for the food that he eats. Place the picture cards in the pocket chart as you tell the story:

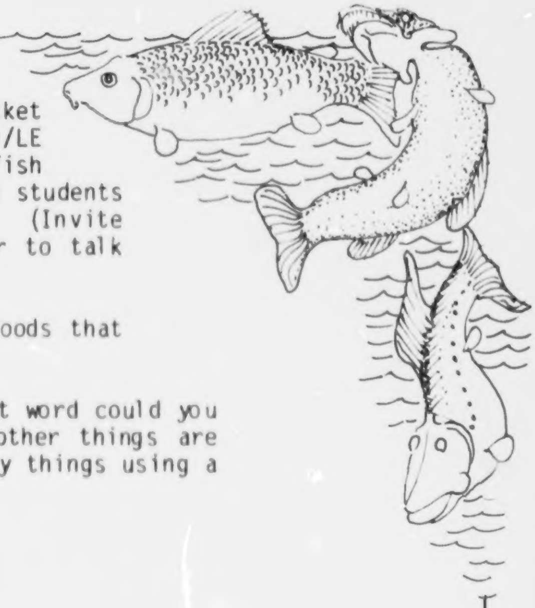


"Charlie was a char, ..."



"One sunny Monday morning..."





b) Compare the list of foods in the pocket chart with the list students made in CD/LE #1b). Are there any differences? Do fish really eat clams, sculpin, etc.? Have students find out what else fish really eat. (Invite parents or your local wildlife officer to talk to students.)

3. Talk about the words used to describe the foods that Charlie ate. For example:

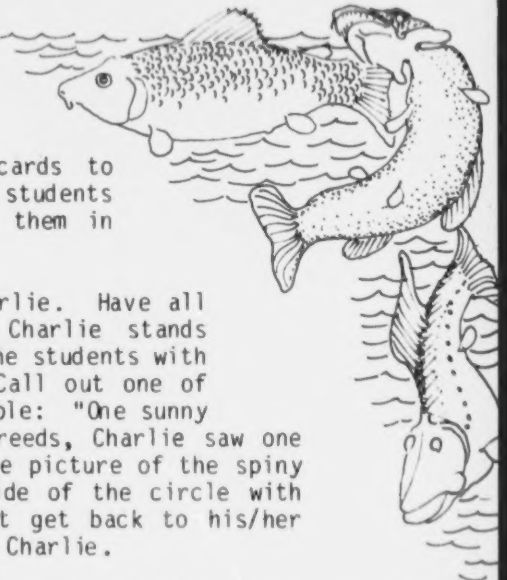
Juicy clams: "What does 'juicy' mean? What word could you use instead of juicy? What other things are juicy?" Make a chart of juicy things using a frame sentence.

What is juicy?

A plum is juicy.
An orange is juicy.
A grape is juicy.

4. a) Tell the story (with visuals) again. Instruct students to listen carefully to the things Charlie saw each day.

b) Remove the cards from the chart. Ask students, "What did Charlie see on Monday?" Replace the appropriate cards as students answer. Continue until all cards are in place. Review the sequence of the story.



Language Practice

L 1. Which Picture?: Distribute picture cards to students. As you tell the story, students holding the appropriate pictures place them in the pocket chart.

L 2. Charlie: Select one student to be Charlie. Have all other students stand in a circle. Charlie stands outside the circle. Provide seven of the students with the pictures of things Charlie saw. Call out one of the statements from the story, for example: "One sunny Monday morning, while swimming in the reeds, Charlie saw one spiny sculpin." The student holding the picture of the spiny sculpin begins to run around the outside of the circle with Charlie in pursuit. If s/he does not get back to his/her place before being caught, s/he becomes Charlie.

L 3. Elimination: Students raise their hands when they hear items that were not mentioned in the story.

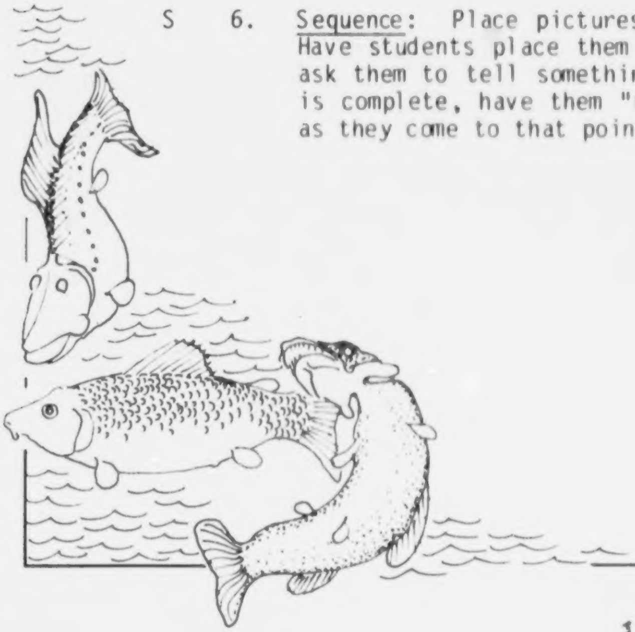
E.g., "Charlie saw:	warty lumpfish	
	fuzzy kittens	(Students raise hands.)
	slimy snails	
	gooey candy."	(Students raise hands.)

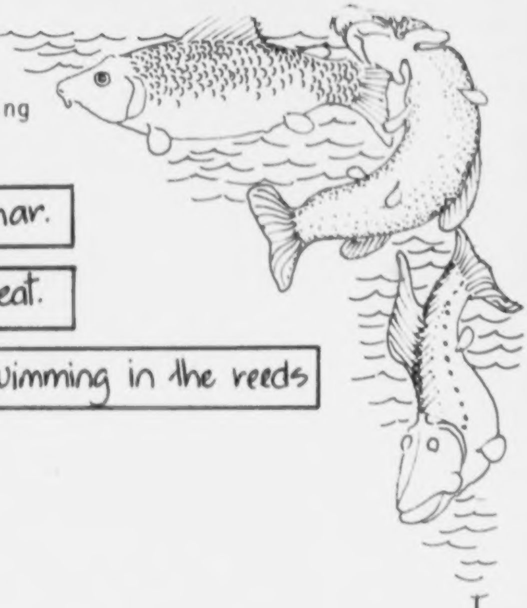
L/S 4. Parrots: Students are parrots and repeat what the teacher says. But they only repeat true statements; if a statement is false, they say nothing.

L/S 5. Catch the Error: Retell the story, substituting other words for the actual vocabulary. Students try to catch the substitutions and provide the correct words.

E.g., "One frosty Monday night, while skiing in the reeds, Charlie smelled one spiny sculpin. But he couldn't see it!"

S 6. Sequence: Place pictures from the story on the chalkboard ledge. Have students place them in the correct sequence. As they do so, ask them to tell something about the pictures. When the sequence is complete, have them "read" the story, pointing to each picture as they come to that point in the story.





L/R 7. Sentence Strips: Tell the story using sentence strips and pictures:

Charlie was a char | a very hungry char.
He was always looking for something to eat.
One sunny | Monday | morning | while swimming in the reeds
Jacky saw | one spiny sculpin.
But he couldn't catch it.

Read again with students as you point to the words. Have individual students read sentences as you point to them.

R/W 8. Big Book: Make a Big Book with students. Have them work in groups, with each group completing one page.

Application

1. a) Find out what foods other species of fish eat. Make a book using the frame sentence, "__________ is food for a __________."

   b) Make scrapbooks of students' favourite foods with pictures cut from magazines. Identify the foods using the sentence, "__________ is food for me."

2. Have groups of students use the model "Charlie the Char" to write original stories. Have each group brainstorm ideas, then choose their favourites to use in writing their stories.

3. Have students write new endings for Charlie the Char. What might have happened if he hadn't gobbled everything up?

ACTIVITY IDEAS

TOPIC E: LIFE CYCLE

Science/Social Studies

1. Make a mural showing the life cycle of fish.
*2. Start an egg collection. Note the variations in colour and size. How are fish eggs different from those laid by birds? What other animals lay eggs? (snakes, turtles)
3. Compare the lifecycles of other creatures known to the students.

Teacher's Notes

These are possible activity ideas for this topic. They can be used in lessons you make up, as enrichment activities, or as learning centre activities. Most can be done in any language. Activities with an * are actually used in the sample lessons which follow. Spaces have been left for you to record your own activity ideas.

Math

1. Obtain a fish that is filled with eggs. Have students estimate the number of eggs.

Language Arts

1. Try to obtain different types of fish eggs. (From local fish and commercially prepared caviar.) Have a tasting party. Brainstorm words to describe the taste/texture/colour/size of the various roe.
2. Some fish swim together in "schools." Imagine what kinds of things they might learn in their "schools."
3. Brainstorm other words to describe a group of fish swimming together.
   E.g., A wriggle of fish.
   A wave of fish.
4. What words describe other groupings of animals?
   E.g., herd of caribou
   flock of geese

Music, Poems, Stories

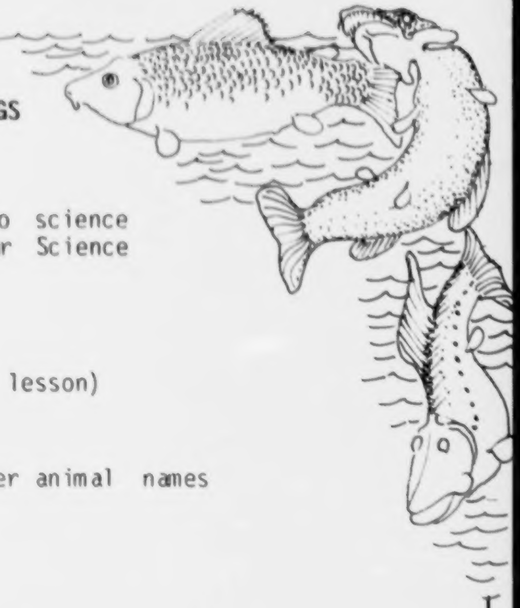
Art

*1. Read students the story Seven Eggs. Make a collage of animals that hatch from eggs. Have students draw pictures or cut them from magazines.

Physical Education/Movement

1. Imitate a school of fish swimming together. All students must move as a group in the same direction and at the same speed.

Special Activities



LESSON: **FISH HATCH FROM EGGS**

As this lesson emphasizes language related to science concepts, you may wish to teach it during your Science period.

English Vocabulary (* actually developed in this lesson)

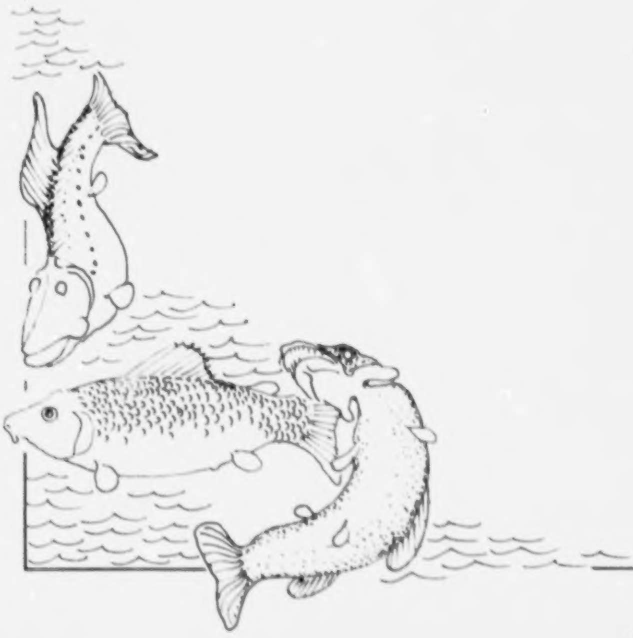
- * egg/s
- * birds
- * snakes
- * turtles
- * frogs
- * insects
- * other animal names

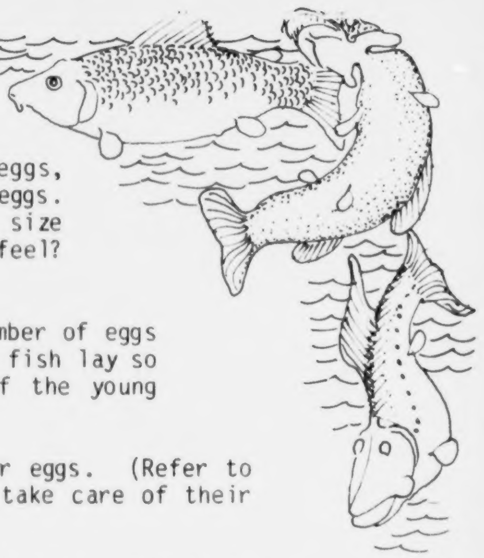
English Sentence Patterns (* actually developed in this lesson)

* Fish hatch from eggs just as _________ do.

Special Materials Required

Fish/fish eggs
Jar of rice





Concept Development/Language Exposure

1. Visit a nearby lake or river to search for fish eggs, or try to obtain a fish that is full of eggs. Examine the eggs: What colour are they? What size are they? How many are there? How do they feel? Etc.

2. Fill a small jar with rice to illustrate the number of eggs that a fish lays. Discuss possible reasons why fish lay so many eggs: other fish and animals eat many of the young fish after they hatch, etc.

3. Talk about different places where fish lay their eggs. (Refer to the background information provided.) Do fish take care of their young like other animals do?

4. a) Brainstorm a list of animals that hatch from eggs. Record on a chart. Compare the eggs of these animals to fish in terms of size, number, places where they lay them, etc.

   b) Make statements using the sentence pattern: Fish hatch from eggs just as __________ do.

Language Practice

L 1. True/False: Make statements using the sentence pattern. If a statement is true, students make "fish faces"; if it is false, they remain still.

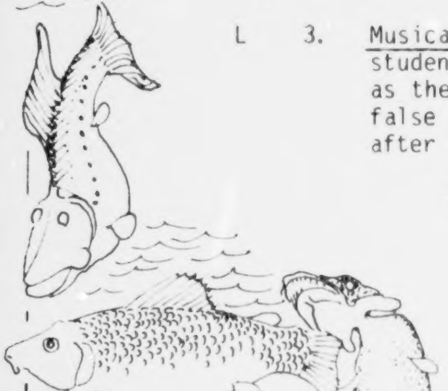
E.g., "Fish hatch from eggs just as whales do." (F)
"Fish hatch from eggs just as snakes do." (T)

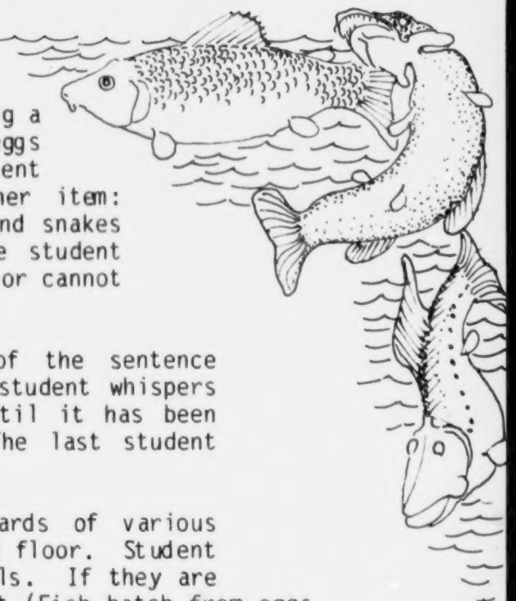
L 2. Categorization: Think of the vocabulary related to a specific topic. List examples and non-examples for a category of items related to the topic. Ask students to raise their hands on hearing a word that doesn't belong.

E.g., "Hatch from Eggs: snakes, trout, caribou, geese, ..."

L 3. Musical Chairs: Set the chairs (one less than there are students) back to back in a row. Make statements about eggs as the students walk around the chairs. When students hear a false statement, they must sit on a chair. Remove one chair after each round.

E.g., "Fish hatch from eggs just as people do.
(Students sit down.)
"Fish hatch from eggs just as frogs do.
(Students keep walking.)





L/S 4. Cumulative Chain Drill: Begin by making a statement such as "Fish hatch from eggs just as frogs do." The first student repeats the statement and adds another item: "Fish hatch from eggs just as frogs and snakes do." Continue in this way until one student cannot remember all the previous items or cannot add a new one.

L/S 5. Gossip: Begin by whispering one of the sentence patterns to the first student. That student whispers it to the next student and so on until it has been whispered to all of the students. The last student must repeat the pattern aloud.

S. 6. Concentration: Make up a set of cards of various animals and place them face down on the floor. Student turns up two cards and names the animals. If they are both egg layers, s/he makes a statement (Fish hatch from eggs just as ________ and ________ do.); if they are not, s/he returns the cards to their original positions.

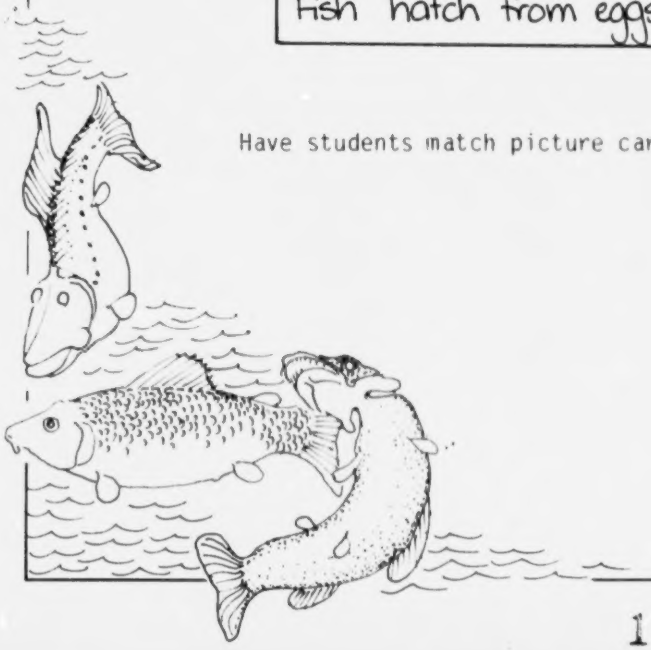
S. 7. Hot Potato: Put the cards from activity #6 in a bag. Have students sit in a circle and pass the bag around as music plays. When the music stops, the student holding the bag withdraws one card and makes a statement using the sentence pattern. The other students decide if the statement is true or false.

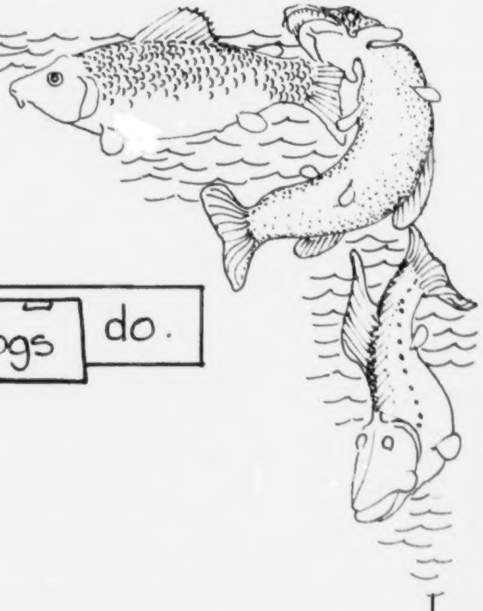
S/R 8. Sentence Strips: Have students make true statements using the sentence pattern. Record their statements on sentence strips and place them in the pocket chart.

Fish hatch from eggs just as snakes do.

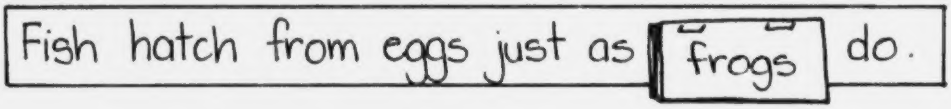
Fish hatch from eggs just as birds do.

Have students match picture cards to the appropriate sentence strips.



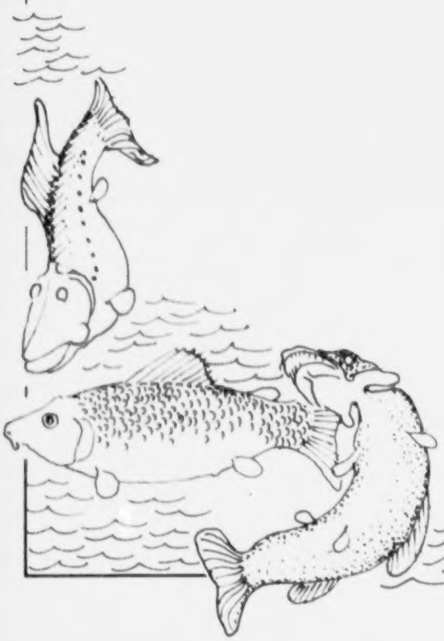


R/W 9. Flip Book: Have students make flip books as shown.


Fish hatch from eggs just as
frogs
do.

Application

1. Read students the story Seven Eggs by Merdith Hooper (Patrick Hardy Books, London, 1985). Make a mural of animals that hatch from eggs.



Science/Social Studies

1. Make a map showing good fishing spots in your area.
*2. How many different ways is fish available in your community? (fresh, dried, frozen, canned, breaded, made into chowder, etc.)
*3. Prepare a meal with fish. Discuss the reasons why fish are an important part of our diet. Talk about the different ways in which we prepare fish (e.g., some must be scaled).
4. Demonstrate cleaning/filleting of fish.
5. Demonstrate setting net for ice fishing.
6. Discuss jobs related to fish - fisherman
   - workers in a fish plant
   - deep sea diving
7. In some communities, people used fish skins to make pouches or bags. Interview elders to find out if they know about or have heard of this practice.

Teacher's Notes

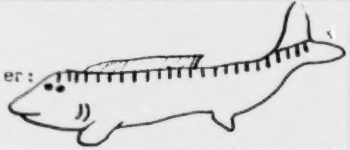
These are possible activity ideas for this topic. They can be used in lessons you make up, as enrichment activities, or as learning centre activities. Most can be done in any language. Activities with an * are actually used in the sample lessons which follow. Spaces have been left for you to record your own activity ideas.

ACTIVITY IDEAS

TOPIC F: PEOPLE AND FISH

Math

1. Provide each student with a fish ruler:



Have them use the ruler to measure various items in the classroom or specific items related to fish/fishing. (For example: a length of fishing line, a fishing rod, an actual fish, a variety of fish hooks, etc.)

2. Fish Line Activities: Write numerals on paper fish. Students attach them to a "fishing line" in the correct sequence. Or, write a problem on the bait attached to the end of the line. Students match fish on which answers are written to the appropriate bait.

Language Arts

1. Write words or sentences on paper fish. Students take turns flipping fish into the air using a lightweight frying pan. Students read only those fish which land with the words upright.
2. List the fish caught in your area in order of "best eating."
3. Provide each student with a length of string (their fishing line). For each book they read, they add a paper fish to their line. On the fish they write the name of the book and a sentence that tells why they did/didn't enjoy the book.
4. Discuss the word "exaggeration" and have students write "fish stories." Collect these truth stretchers in a class booklet or in a huge goldfish bowl.

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Music, Poems, Stories

1. "A-Fishing We Will Go"
2. "Fishing"
3. "Apusski Dusky"
4. "Little Johnny"
5. "Did You Ever"
6. "Fishy in the Pan"
7. "Silver Knots"

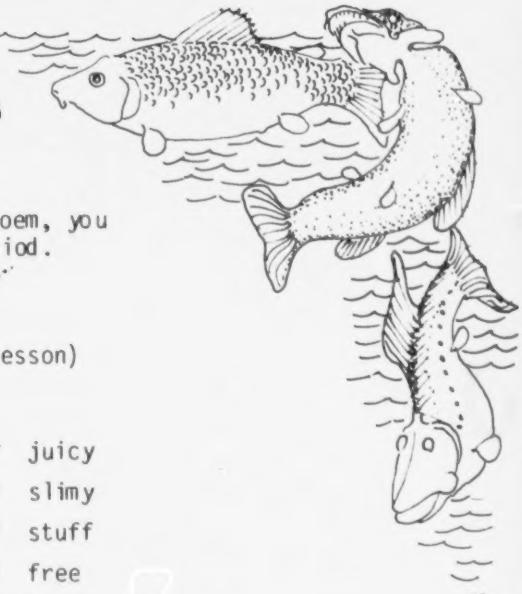
Art

Physical Education/Movement

1. Line students up in rows of six and have them face the front of the room. They are fish nets. (Have them hold out their arms and hold hands.) When teacher says, "Nets face front," students face front. When teacher says, "Nets face side," students face the right, still maintaining their positions. Choose one student to be a whitefish (or whatever fish is most common in community). Another student is the fisherman. The fisherman chases the fish up and down the lines. The teacher changes the nets by saying, "Nets face front," or "side," when appropriate. No one is allowed to break through a net. When and if the fisherman catches the fish, he must state a use he has for it, otherwise he has to let the fish go and a new fish is chosen for him to chase.

Special Activities

1. Go on a field trip to set nets either in summer or winter. You may also demonstrate other fishing methods.
2. Find out about mermaids. Are they real?
3. Have an elder demonstrate preparation of dry fish.
4. Students mime a person fishing, checking nets, jigging, preparing fish, a dog eating fish, weaving nets, etc.
5. Make a cookbook of fish recipes, perhaps in the shape of a fish.
6. Play Centre - Provide fishing rods, nets, plastic fish, rubber boots, hip waders, dip net, etc.
7. Decorate the reading centre to look like the ocean or a lake. Hang fish nets, floats, etc. Put a small boat in the centre and fill it with books about fish.
8. Fill a fishing tackle box with:
   - a) art supplies to make a fish/fishing scene.
   - b) items to weigh (fish hooks, sinkers, reels, etc.).
   - c) word cards about fishing (a "fish" word bank).
   - d) game board and pieces for a "fishing" game.



LESSON: **LET'S GO FISHING**

As this lesson emphasizes language related to a poem, you may wish to teach it during your Language Arts period.

English Vocabulary (* actually developed in this lesson)

* lake trout
* Arctic grayling
* whitefish
* jackfish

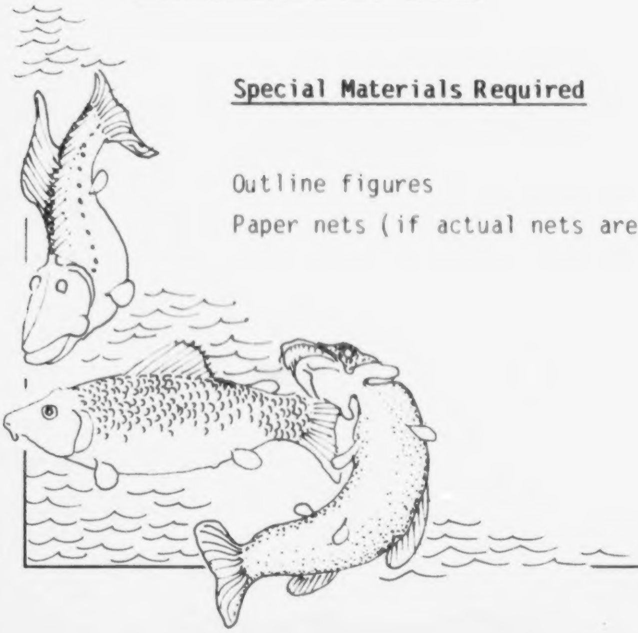
* treat
* hook
* jig
* net

* juicy
* slimy
* stuff
* free
* batch

English Sentence Patterns (* actually developed in this lesson)

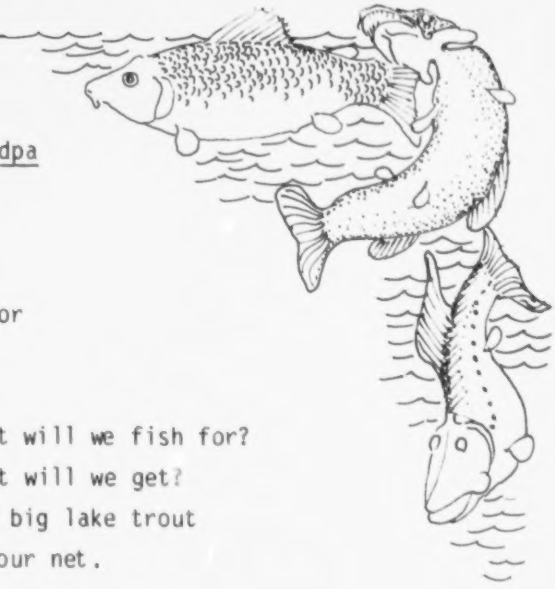
* Grandpa, Grandpa
Come with me.
Can we go fishing,
Just you and me?

What will/did we fish for?
What will/did we ________?
__________________________.



Special Materials Required

Outline figures
Paper nets (if actual nets are not available)



Let's Go Fishing

Based on the original Grandpa, Grandpa
(A Story Box Book)
By Joy Cowley and June Melser
Shortland Publications, 1980
Adapted by M. Gilmour and C. McGregor

Grandpa, Grandpa
Are you free?
Can we go fishing,
Just you and me?

What will we fish for?
What will we get?
One big lake trout
In our net.

Grandpa, Grandpa
Are you free?
Can we go fishing,
Just you and me?

What will we fish for?
What will we hook?
Two Arctic grayling
For Mom to cook.

Grandpa, Grandpa
Are you free?
Can we go fishing,
Just you and me?

What will we fish for?
What will we jig?
Three fat whitefish
Juicy and big.

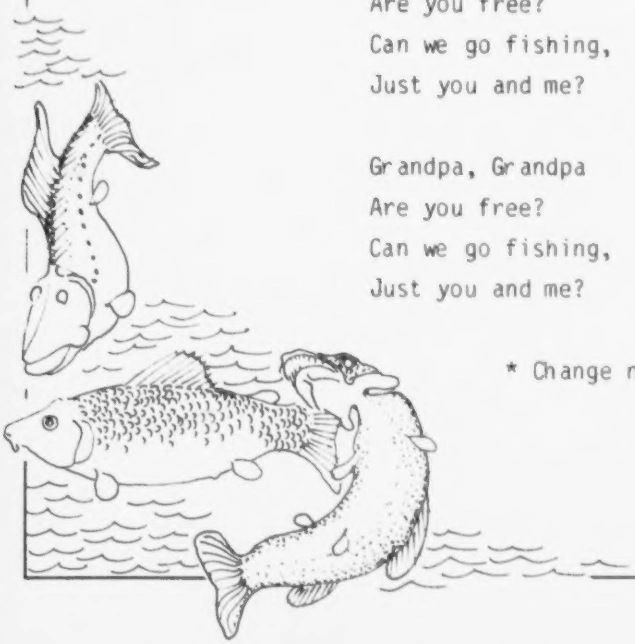
Grandpa, Grandpa
Are you free?
Can we go fishing,
Just you and me?

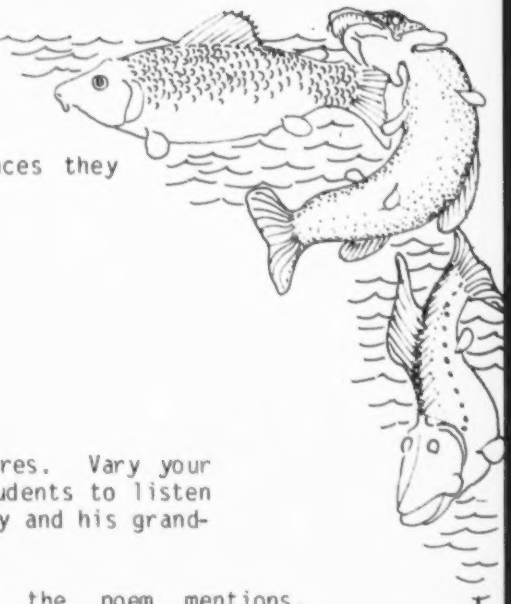
What will we fish for?
What will we catch?
Four slimy jackfish
To add to the batch!

Grandpa, Grandpa
Are you free?
Can we go fishing,
Just you and me?

What did we fish for?
What did we get?
We got lots of fish --
And we got wet!

* Change names of fish to those common in your area.





Concept Development/Language Exposure

1. Discuss with students the fishing experiences they have had:

   "Who did you go with?
   Where did you go?
   How many fish did you catch?
   What kind of fish did you catch?
   How did you catch the fish?
   What did you do with them?"
   Etc.

2. a) Recite the poem using the outline figures. Vary your voice for the two characters. Tell students to listen carefully to find out how the little boy and his grandfather caught the fish.

   b) Ask students what methods/equipment the poem mentions. Discuss each of these.

      i) Net: Bring a fish net into the classroom for students to examine. Discuss this method of fishing: Have you ever seen someone set a fish net? How/where did they do it? What did they catch in it? What did Grandpa and the little boy catch in their net?

      ii) Hook: Collect a variety of fish hooks for students to look at and handle (carefully!). Demonstrate how the hook attaches to the line on a fishing rod. Demonstrate casting (outside or in the gym). Discuss students' experiences with this method of fishing. What kind of fish did they catch by this method in the poem?

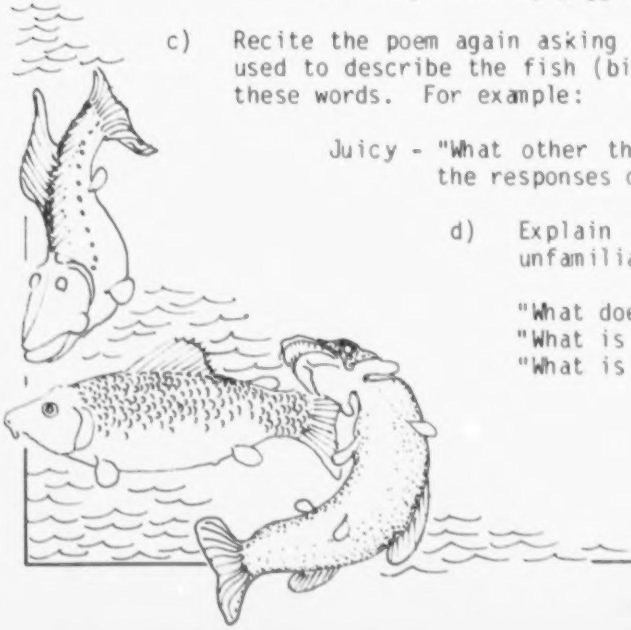
      iii) Jig: Try to find pictures of people jigging for fish. What equipment do people use in this method? Let students make their own jigging lines and practice the movements. What kind of fish did they catch by jigging in the poem?

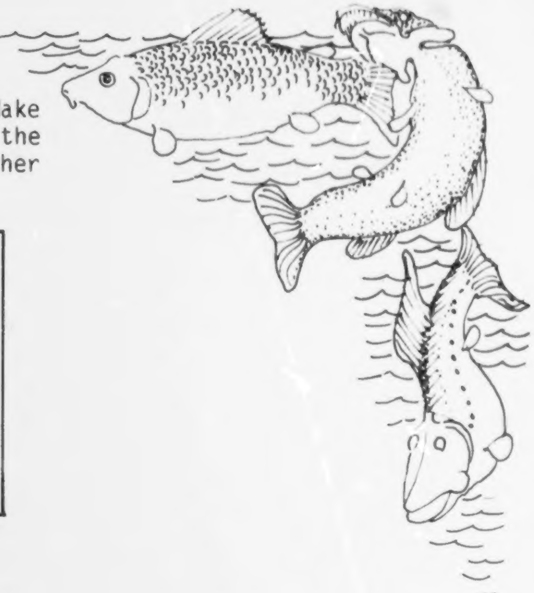
   c) Recite the poem again asking students to listen for the words that are used to describe the fish (big, fat, juicy, slimy). Elicit and discuss these words. For example:

      Juicy - "What other things do you know that are juicy?" (List the responses on a chart.)

   d) Explain any other vocabulary items which are unfamiliar (free, batch):

      "What does __________ mean?"
      "What is another word for __________?"
      "What is the opposite of __________?"





e) Review the concept of rhyming words. Make charts of rhyming words used in the story. Have students brainstorm other rhyming words. For example:

_ig	_ook
big	book
jig	cook
pig	hook
rig	look
twig	took

3. Recite the poem once again. Encourage students to join in.

Language Practice

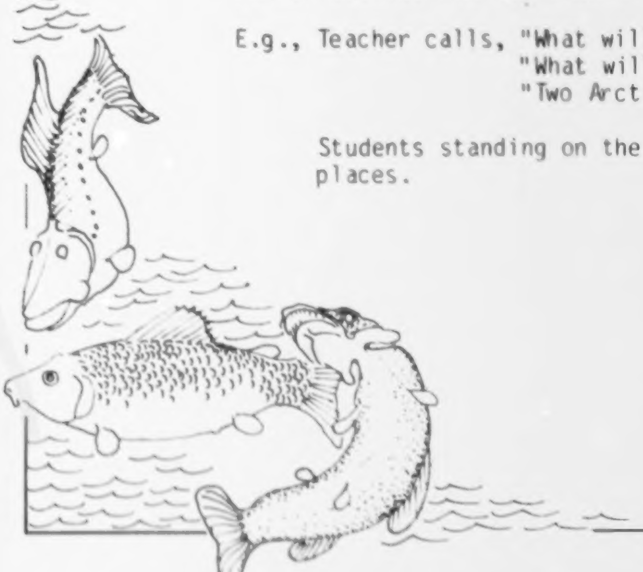
L 1. Key Word: Provide each student with a paper fish. Whenever they hear a specified word, they wave their fish in the air.

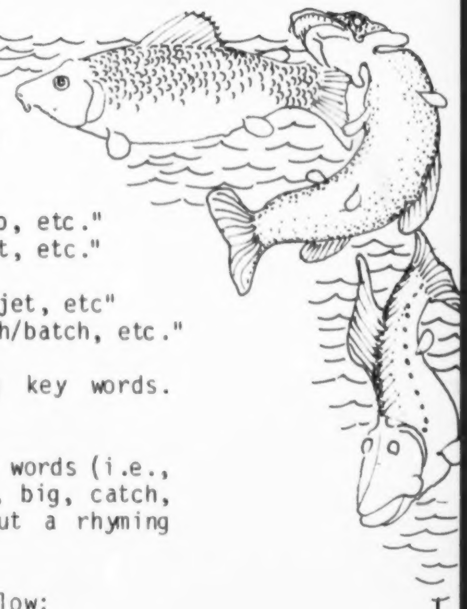
E.g., "Listen for the word "slimy" - slide, slip, slimy, slim, sling, lime, slimy, etc."

L 2. Middle Man: Place two sets of pictures on the floor in lines opposite each other. Assign each student a verse from the poem. Be sure to give two students the same one. Each student stands on the appropriate picture. The middle man has no picture. When the teacher calls out a verse, the two students who have been assigned to that item attempt to exchange positions before the middle man can take one of their places. If the middle man succeeds, he takes over that item and the unlucky runner becomes the new middle man.

E.g., Teacher calls, "What will we fish for?"
"What will we hook?"
"Two Arctic grayling for Mom to cook."

Students standing on the pictures of the grayling attempt to trade places.





L 3. Same/Different: Call out a series of rhyming word pairs. Students clap when they hear a non-rhyming pair. E.g.,

"Get/net, get/set, get/got, get/wet, get/go, etc."
"Hook/book, hook/cook, hook/look, hook/hoot, etc."
"Me/tree, me/free, me/you, me/see, etc."
"Jig/big, jig/wig, jig/jog, jig/twig, jig/jet, etc"
"Catch/hatch, catch/latch, catch/cat, catch/batch, etc."

L/S 4. Oral Cloze: Recite the poem omitting key words. Students supply these.

S 5. Rhyming Chain: Call out one of the target words (i.e., me, free, get, net, wet, hook, cook, jig, big, catch, batch). Each student, in turn, calls out a rhyming word.

S 6. Choral Speaking: Divide class as shown below:

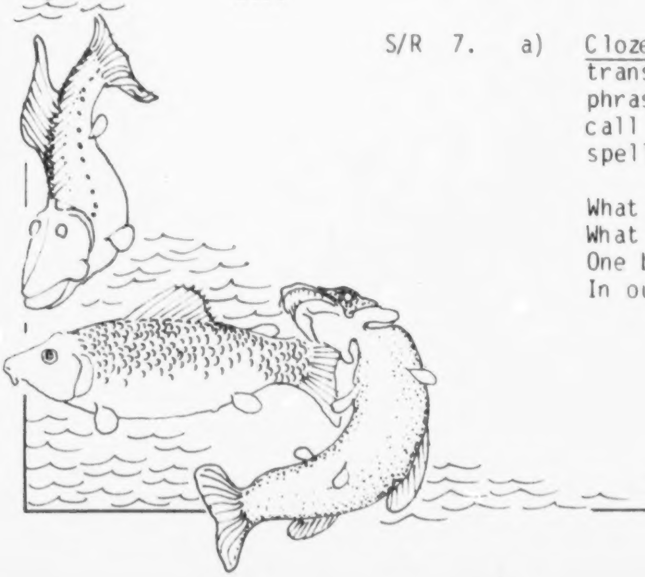
Group 1: Little boy
Group 2: Grandpa
Child 1: One big lake trout
Child 2 & 3: Two Arctic grayling
Child 4 & 5 & 6: Three fat whitefish
Child 7 & 8 & 9 & 10: Four slimy jackfish
All - We got lots of fish and we got wet

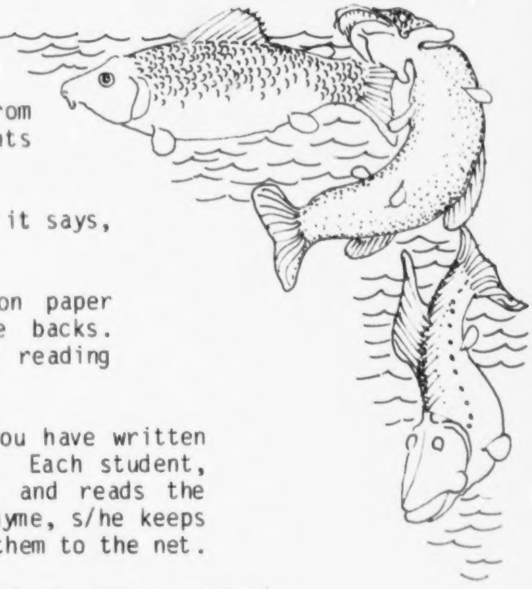
Recite the poem:

Group 1 - "Grandpa, Grandpa
Are you free?
Can we go fishing?
Just you and me?"
Group 2 - "What will we fish for?
What will we get?
Child 1 - "One big lake trout
In our net." (Hold up lake trout in net)
Etc.

S/R 7. a) Cloze: Write the poem on an overhead transparency. Leave out key words or phrases. As you chant the poem, have students call out the missing words and assist you in spelling them. For example:

What will we fish for?
What __________ __________ get?
One big __________ __________
In our __________.





L/R b) Find the Line: Call out lines from the poem. Have individual students point to them on the overhead.

E.g., Paul, come and show us where it says, "What will we catch?"

R 8. Fish Pond: Write key words/phrases on paper fish that have magnetic tape on the backs. Students take turns catching fish and reading the words/phrases.

R 9. Fish Net: Place paper fish on which you have written vocabulary from the poem in a fishnet. Each student, in turn, draws two fish from the net and reads the words written on them. If the words rhyme, s/he keeps the fish; if they do not, s/he returns them to the net.

R/W 10. Vanishing Drill Book: Provide each student with a vanishing drill booklet to complete and illustrate.

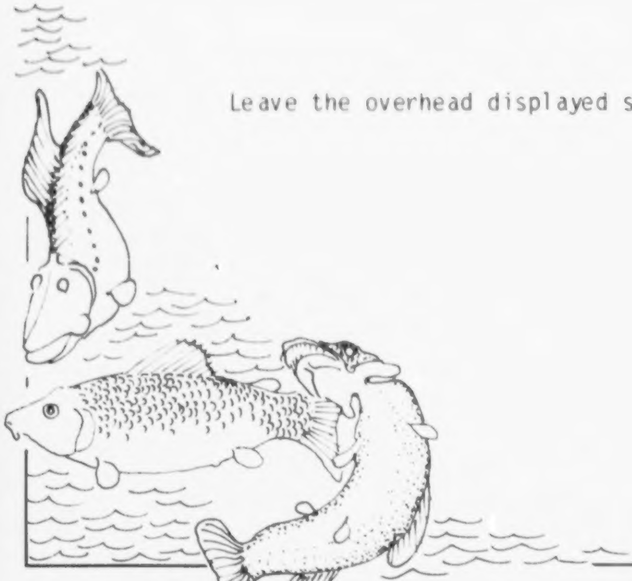
Grandpa, ________
Are you free?
Can we go fishing,
Just _____ and me?

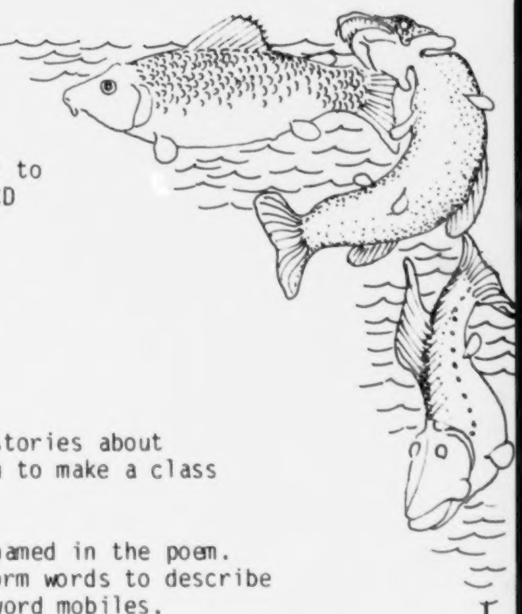
①

What will we fish for?
What ____ ____ get?
One big lake trout
In our ______.

②

Leave the overhead displayed so that students have a model to follow.





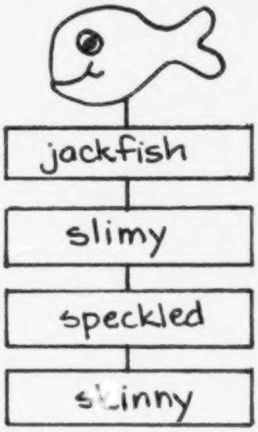
Application

1. Use the frame sentence "What is ________?" to make booklets using the lists developed in CD #2c). For example:

   What is juicy?
   An orange is juicy.
   A cherry is juicy.
   A berry is juicy.
   Etc.

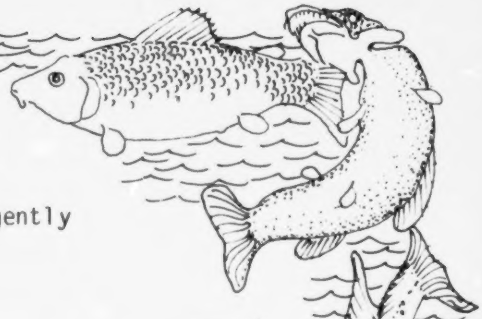
2. Have students dictate/write and illustrate stories about their own fishing experiences. Compile them to make a class book.

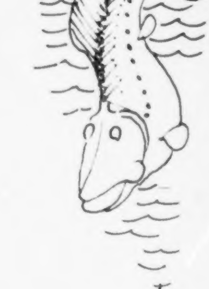
3. Try to obtain actual specimens of the fish named in the poem. Allow students to handle them, then brainstorm words to describe them. Record these words on cards to make word mobiles.



4. Paper Net

   a) Fold the paper in half from top to bottom.
   b) Fold it in half again in the same way.





c) Fold it in half once more.

d) Mark the paper as you see in number 4. Cut it on the marked lines, but not right through.

e) Open the paper again, carefully. Pull gently and there is your net.

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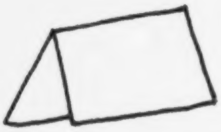

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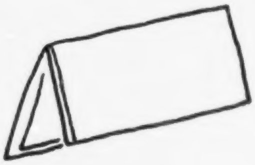

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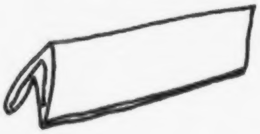

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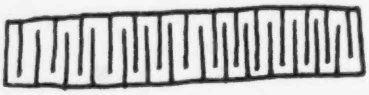

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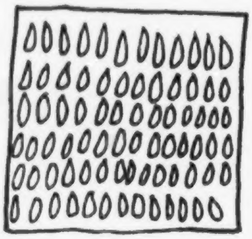
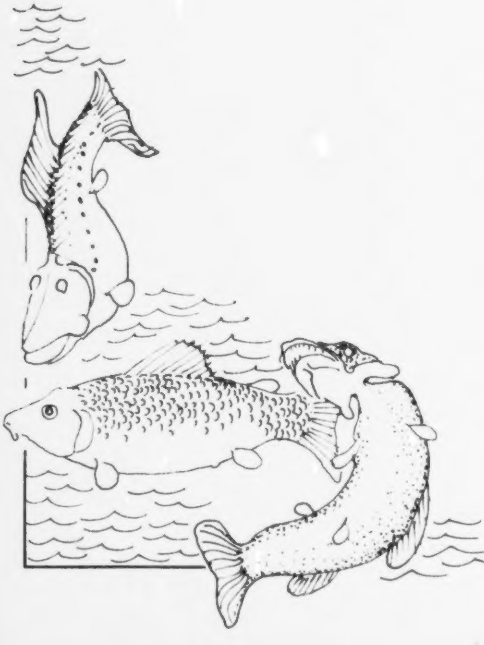
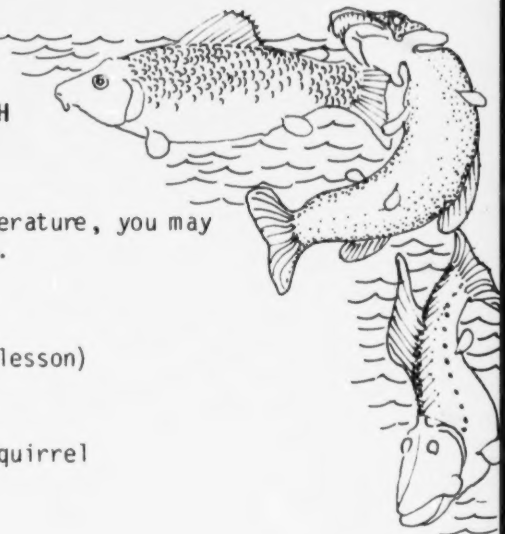






LESSON: **THE BIG BIG FISH**
(Vocabulary Lesson)

As this lesson emphasizes language related to literature, you may wish to teach it during your Language Arts period.

English Vocabulary (* actually developed in this lesson)

* hole
* hook
* woman
* husband
* wife
* boy
* dog
* puppy
* squirrel

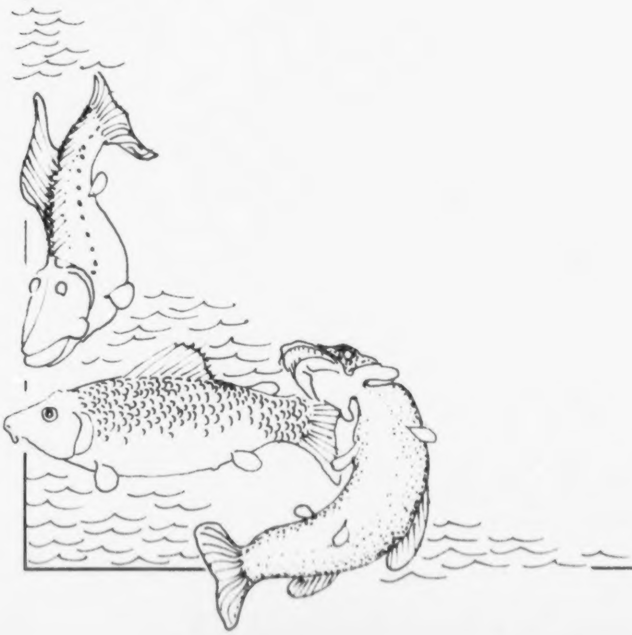
English Sentence Patterns (* actually developed in this lesson)

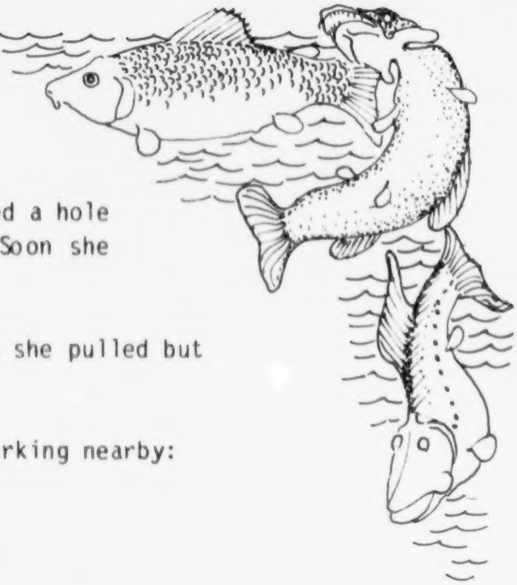
Special Materials Required

Outline figures

Worksheets

NOTE: If students are familiar with the vocabulary items omit this lesson and go on to the lesson on page 130.





The Big, Big Fish

One day a woman went out jigging. She chopped a hole in the ice and dropped a hook into the water. Soon she felt a fish on the line and began to pull.

She pulled and she pulled and she pulled and she pulled but the fish would not come out.

So the woman called to her husband who was working nearby:

"Help! Help! Do you hear my shout?
I pulled the fish but it wouldn't come out!"

And the husband came running. The husband took hold of his wife. They pulled, and they pulled, and they pulled, and they pulled, but the fish would not come out.

So the husband called to his boy who was going into the house.:

"Help! Help! Do you hear my shout?
We pulled the fish but it wouldn't come out!"

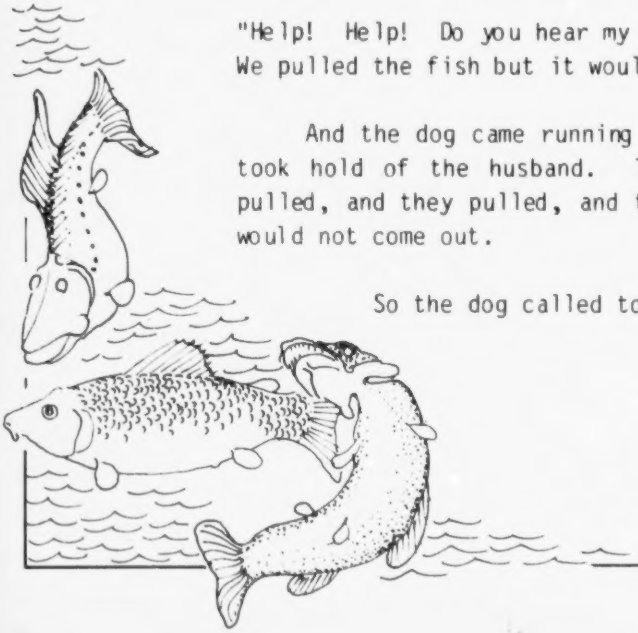
And the boy came running. The boy took hold of the husband. The husband took hold of his wife. They pulled, and they pulled, and they pulled, and they pulled, but the fish would not come out.

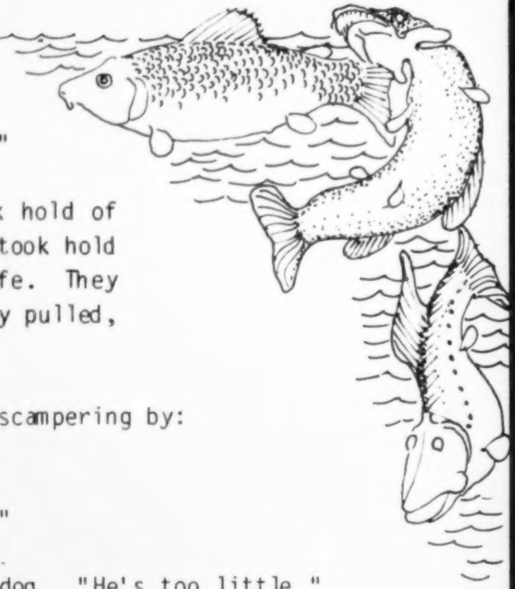
So the boy called to his dog who was behind the house:

"Help! Help! Do you hear my shout?
We pulled the fish but it wouldn't come out!"

And the dog came running. The dog took hold of the boy. The boy took hold of the husband. The husband took hold of his wife. They pulled, and they pulled, and they pulled, and they pulled, but the fish would not come out.

So the dog called to his puppy who was playing near the house:





"Help! Help! Do you hear my shout?
We pulled the fish but it wouldn't come out!"

And the puppy came running. The puppy took hold of the dog. The dog took hold of the boy. The boy took hold of the husband. The husband took hold of his wife. They pulled, and they pulled, and they pulled, and they pulled, but the fish would not come out.

So the puppy called to the squirrel who was scampering by:

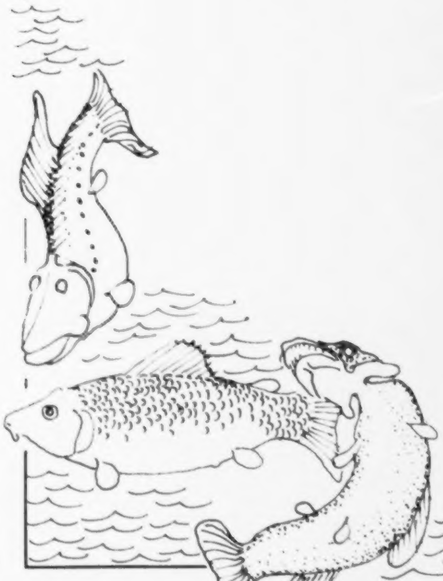
"Help! Help! Do you hear my shout?
We pulled the fish but it wouldn't come out!"

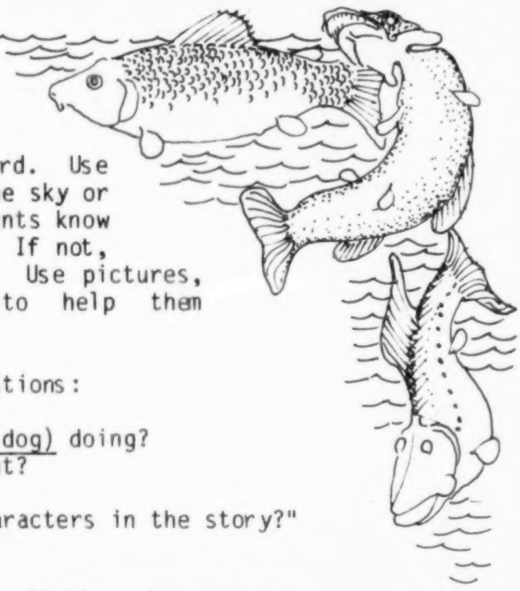
"That little squirrel can't help," said the dog. "He's too little."

"Phooey," said the squirrel. "I could pull that fish out all by myself, but since you all have been pulling I'll let you help too."

So the squirrel took hold of the puppy. The puppy took hold of the dog. The dog took hold of the boy. The boy took hold of the husband. The husband took hold of his wife. They pulled, and they pulled, and they pulled, and they pulled, and ... out came the fish!

The fish fell on the wife. The wife fell on the husband. The husband fell on the boy. The boy fell on the dog. The dog fell on the puppy. The puppy fell on the ground. The squirrel ran away saying, "I told you I could do it!"





Concept Development/Language Exposure

1. a) Put the outline figures on the blackboard. Use coloured chalk to draw in the ground, the sky or other appropriate scenery. See if students know the words for or names of each figure. If not, tell them the terms used in the story. Use pictures, actions or examples if necessary to help them understand each new word.

   b) Discuss with students the following questions:

      "What is the (husband, boy, woman, dog) doing?
      What do you think the story is about?
      What do you think will happen?
      Why are there so many different characters in the story?"
      Etc.

   c) Ask students if they have ever been ice fishing when someone had a difficult time getting the fish out of the water. Many may have heard stories about such incidents even if they have not seen/experienced one themselves. Have several students describe such experiences.

2. Tell the story The Big, Big Fish using the outline figures on the blackboard. Encourage students to join in on the "Help, help..."

3. Tell the story again. Have students dramatize it. After hearing it several times, assign individual students parts to dramatize. Change parts frequently so all students have an opportunity to participate in the drama.

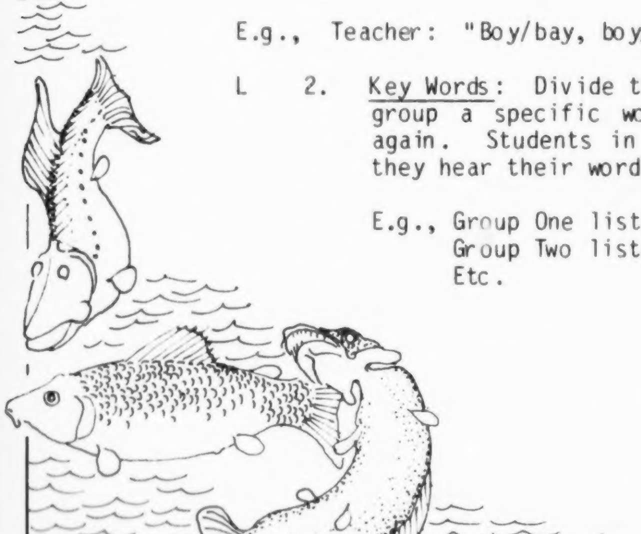
Language Practice

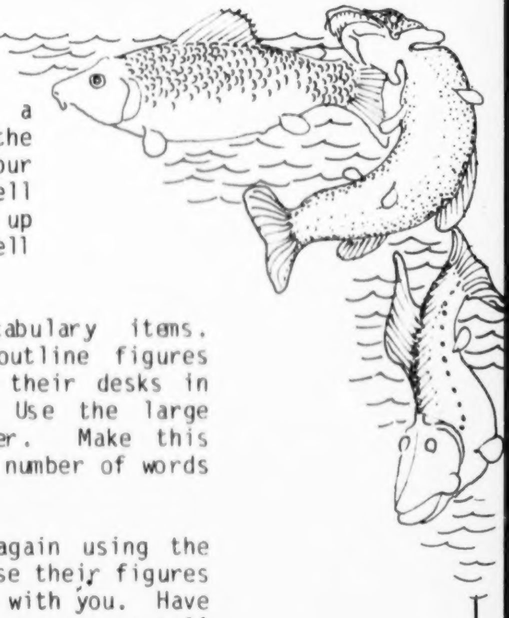
L 1. Stand Up/Sit Down: Have students listen to pairs of words. If they are the same, students stand up. If they are different, students remain sitting down.

E.g., Teacher: "Boy/bay, boy/toy, boy/boy."

L 2. Key Words: Divide the class into several groups. Assign each group a specific word to listen for as you tell the story again. Students in each group do an appropriate action when they hear their word in the story.

E.g., Group One listens for 'dog' and pretends to bark.
Group Two listens for 'boy' and pretends to run.
Etc.





L 3. a) Which Picture: Give students a worksheet with small drawings of the outline figures. Have them colour and cut/tear out each picture. Tell the story again. Students hold up the appropriate figures as you tell each part of the story.

b) Say two or three of the vocabulary items. Students place the appropriate outline figures from the stencil on the floor or their desks in the order you say the words. Use the large figures to show the correct order. Make this activity harder by increasing the number of words said.

L/S 4. a) Story Telling: Tell the story again using the large outline figures. Students use their figures from L#3a) to tell the story along with you. Have them say the vocabulary items with you as you tell the story.

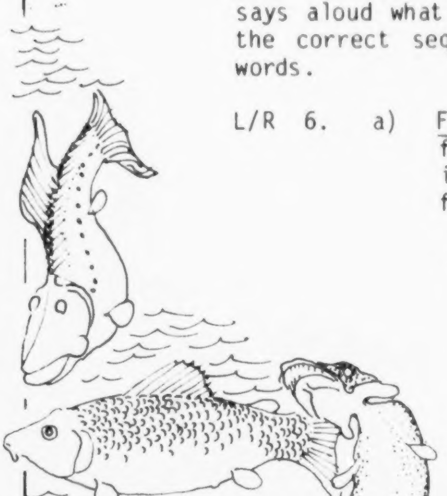
b) Tell the story again (and/or put it on tape at the listening centre) leaving out vocabulary items. Students as a class say the appropriate word left out. Hold up or point to the matching outline figure if students are not sure which word to say.

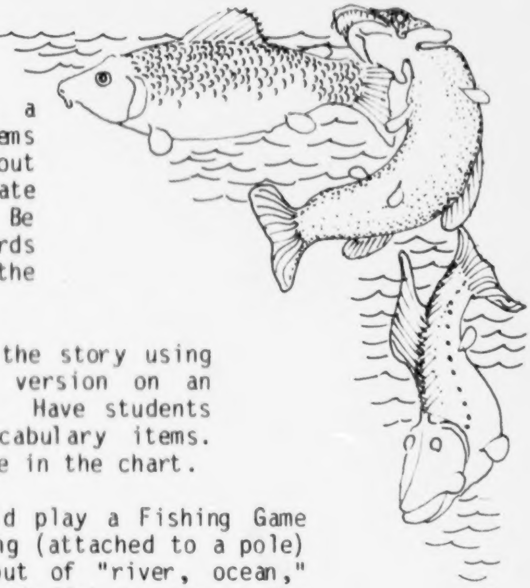
c) Divide the class into groups and assign each group a different word to say. As you tell the story each group says the word assigned to it.

L/S 5. Whisper Game: Divide the class into three groups. Whisper two/three/four (quantity depends upon your students) vocabulary items into the ear of the first student in each group. That student repeats them quietly to the next, etc., until all students have heard the word/s. When all three groups finish, the last student in each group says aloud what s/he heard. Give a point to the group or groups with the correct sequence of words. Repeat several times with different words.

L/R 6. a) Flashcards: Tell the story again with the large outline figures. As you say each character's name or vocabulary item hold up a flash card with the word on it. Tape each flashcard to the appropriate figure.

b) Flashcards: Hand out a second set of word cards to students. As you tell the story again each student with a card goes up and matches his/her word card to the appropriate one on the blackboard.





c) Flashcards: Give each student a worksheet with the vocabulary items written on it. Have them cut out each word and hold up the appropriate one when you say it in the story. Be sure students can see the word cards matched to the outline figures on the blackboard.

S/R 7. a) Dictation: Have students retell the story using their own words. Write their version on an experience chart as they tell it. Have students find and identify words for vocabulary items. Have them match word cards to those in the chart.

R b) Fish Pond: Younger students could play a Fishing Game where they use a magnet on a string (attached to a pole) to get fish shaped flash cards out of "river, ocean," etc. (Put a metal paper clip on each fish to attract the magnet.) They read the words they catch and match them to the chart or the figures.

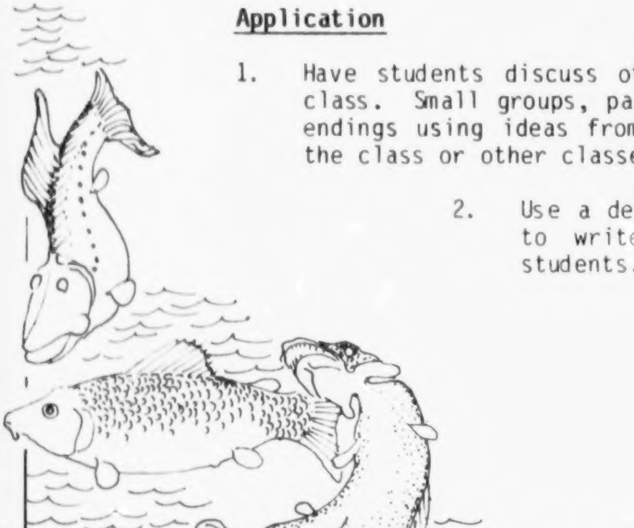
R/W 8. Worksheet: Give each student a worksheet (L#3a) with small drawings of the outline figures. They can cut out a list of words and paste the appropriate one next to each picture or write in the appropriate word in a blank space. Be sure students have models from which to copy the words.

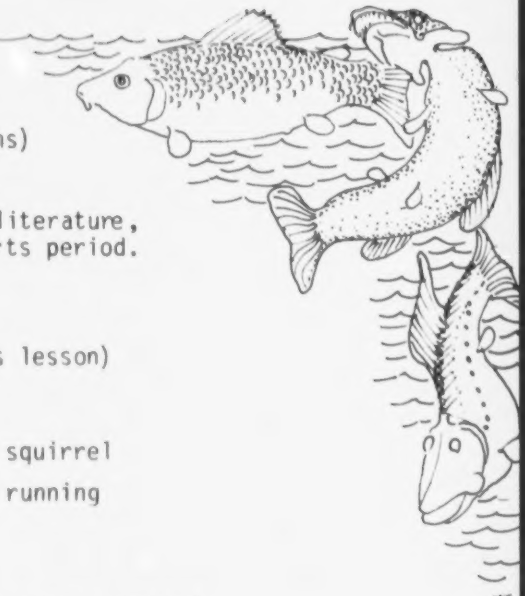
R/W 9. Scrambled Words: Cut up two copies of several of the vocabulary flash cards into individual letters. Mix up the letters from each set and put them in a pile on the floor. Divide students into two teams. Call out one of the words. One student from each team makes the word out of the letters in one pile. When s/he finishes s/he reads the word out loud. The first student finished with a correctly spelled word gets a point for his/her team.

Application

1. Have students discuss other possible endings for the story as a class. Small groups, pairs or individuals could make up their own endings using ideas from the discussion. Share with the rest of the class or other classes.

2. Use a description of a real experience from CD#1c) to write your own version of the story with students. Illustrate and display.





LESSON: **THE BIG BIG FISH**

(Vocabulary and Sentence Patterns)

As this lesson emphasizes language related to literature, you may wish to teach it during your Language Arts period.

English Vocabulary (* actually developed in this lesson)

- * jigging
- * hole
- * hook
- * woman
- * husband
- * wife
- * boy
- * dog
- * puppy
- * squirrel
- * running

English Sentence Patterns (* actually developed in this lesson)

_________ pulled and _________ pulled and _________ but/and the fish ______ .

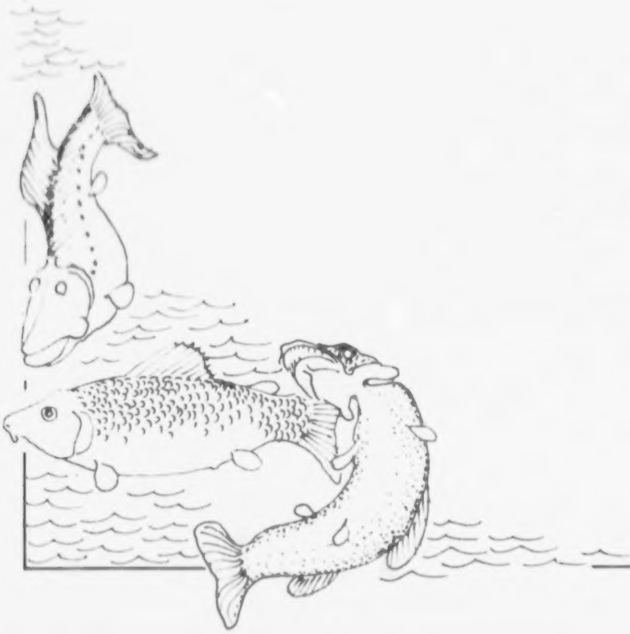
So the _________ called to _________ who was _________.

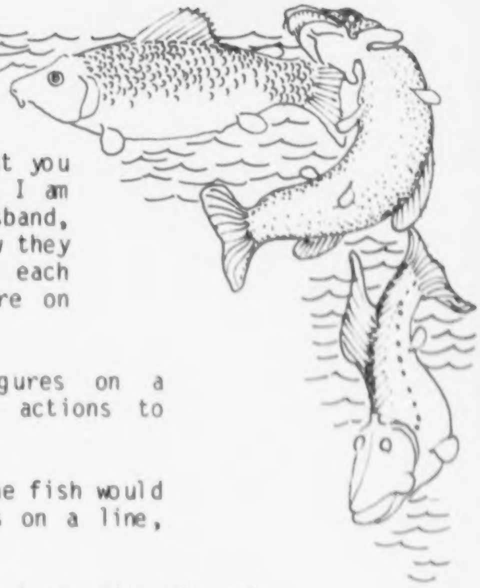
The _________ took hold of the _________.

Special Materials Required

Outline figures

Worksheets





Concept Development/Language Exposure

1. Give students a brief outline of the story that you are going to tell them. For example: "Today, I am going to tell you a story about a woman, her husband, their boy, a dog, a puppy and a squirrel and how they catch a big, big fish." As you mention each character, place the appropriate outline figure on the board.

2. a) Tell the story. Pin the outline figures on a clothesline as you mention them. Use actions to illustrate the verbs.

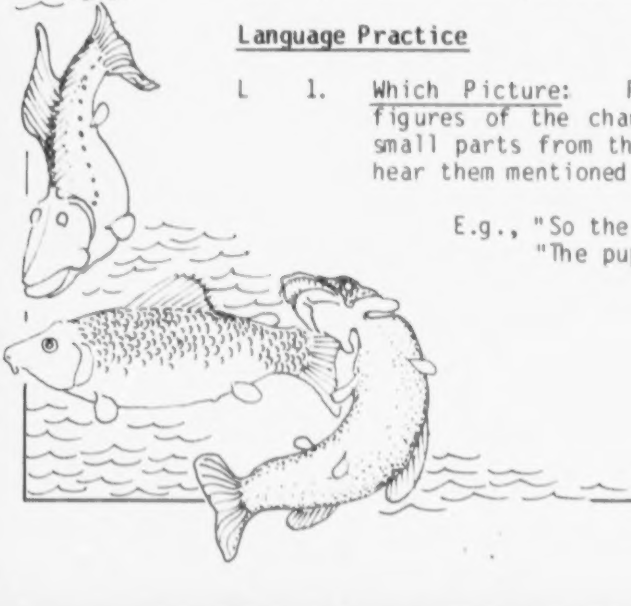
   E.g., They pulled and they pulled... but the fish would not come out. (Pretend to pull, as on a line, then shake your head.)

   b) Discuss the story with students. Ask both literal and interpretive questions:

   "What season do you think it was? Why?
   Who caught the fish?
   How did she catch it?
   Who came to help first? Second? Third? Etc.
   Who was the strongest?
   What would the woman have done if the fish had not come up?
   What do you think she said when the fish came up?
   Could this story really happen?
   How do you think the people and animals felt when the squirrel pulled up the fish?
   Can you think of a game that is like the story?" (Tug-of-war.)

   c) Tell the story again.

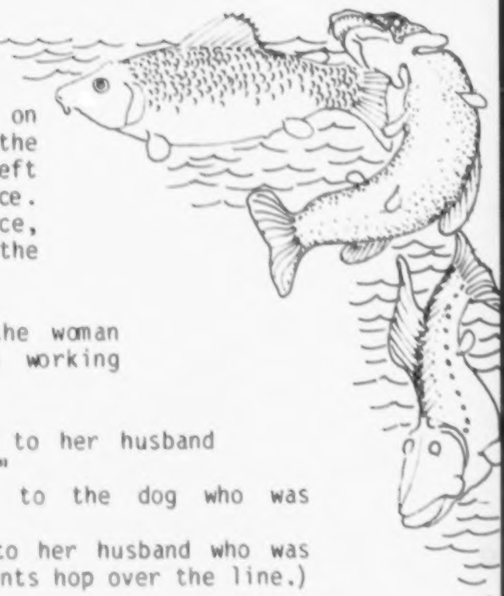
3. Select students to play the characters in the story. Attach a heavy weight (the 'fish') to a line. Have them act out the story as you narrate. Encourage the entire class to chant, "Help! Help! Do you hear my shout? I/We pulled the fish but it wouldn't come out!"



Language Practice

L 1. Which Picture: Provide each student with small outline figures of the characters to colour and cut out. Call out small parts from the story. Students hold up figures as they hear them mentioned.

E.g., "So the woman called to her husband..."
"The puppy took hold of the dog.."



L 2. Zig-Zag Line: Make a masking tape line on the floor. Have one student stand on the right side, the next student on the left side, and so on until all are in place. When students hear a specified sentence, they hop over the line, thus producing the "zig-zag."

E.g., Listen for the sentence, "So the woman called to her husband who was working nearby."

Teacher: "So the woman shouted to her husband who was working nearby."
"So the woman called to the dog who was working nearby."
"So the woman called to her husband who was working nearby." (Students hop over the line.)

L/S 3. Catch the Error: Retell the story, substituting other words for familiar vocabulary. Students try to catch the substitutions and provide the correct words.

"One night, a woman went out sewing. She melted a hole in the ice and dropped a pail into the water." Etc.

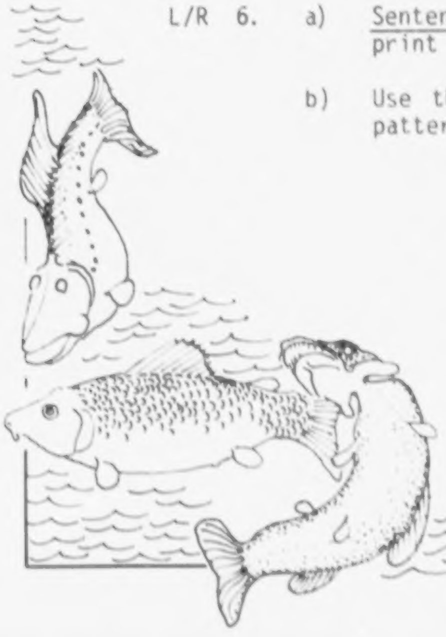
L/S 4. Oral Cloze: Tell the story using the pictures in the book. Omit key words; have student provide these words:

Teacher: "One day a _________ ..." (Hold up picture of woman.)
Students: "woman."

L/S 5. Gossip: Teacher begins by whispering one of the sentence patterns to first student. That student whispers it to the next student and so on until it has been whispered to all of the students. The last student must repeat the pattern out loud.

L/R 6. a) Sentence Strips: Present the entire story and introduce the print on sentence strips in the pocket chart.

b) Use the sentence strips to show the repetition of sentence patterns.



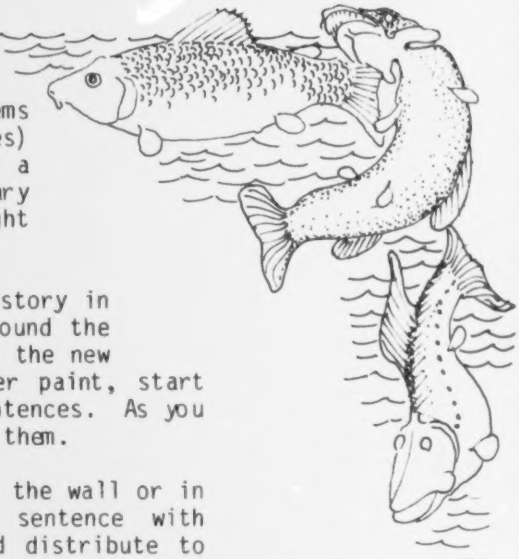
The husband took hold of his wife.

The boy took hold of the husband.

The dog took hold of the boy.

The puppy took hold of the dog.

The squirrel took hold of the puppy.



R 7. Flashlight Game: Write vocabulary items on cards (you may add small picture clues) around the room. Give a flashlight to a student and say one of the vocabulary items. The student shines the flashlight on the appropriate word card.

R 8. Wax Resist: Write sentences from the story in wax on mural paper. Group students around the paper and tell them you've lost some of the new sentences. With a dark coloured poster paint, start painting in areas that you know have sentences. As you reveal the sentences have students read them.

L/R 9. Echo Reading: Place sentence strips on the wall or in the pocket chart. Echo read each sentence with students. Remove entire sentences and distribute to students. Begin telling the story. Have students replace the sentence strips in the chart in the correct sequence.

R 10. Scrambled Sentences: Cut sentence strips into words and have students rebuild the sentences.

R/W 11. Vanishing Technique: Write the story, using the vanishing technique, on an overhead transparency. Have students assist you in filling in the blanks. Later, repeat this activity on individual worksheets for students to complete on their own or with a friend. Be sure that the model (on the overhead) is available as a reference.

Application

1. Use the model to write new stories.

a) Add adjectives and adverbs:

The ________ woman called ________ to her ________ husband.

old
beautiful

loudly
quickly

old
lazy

b) Change nouns and verbs:

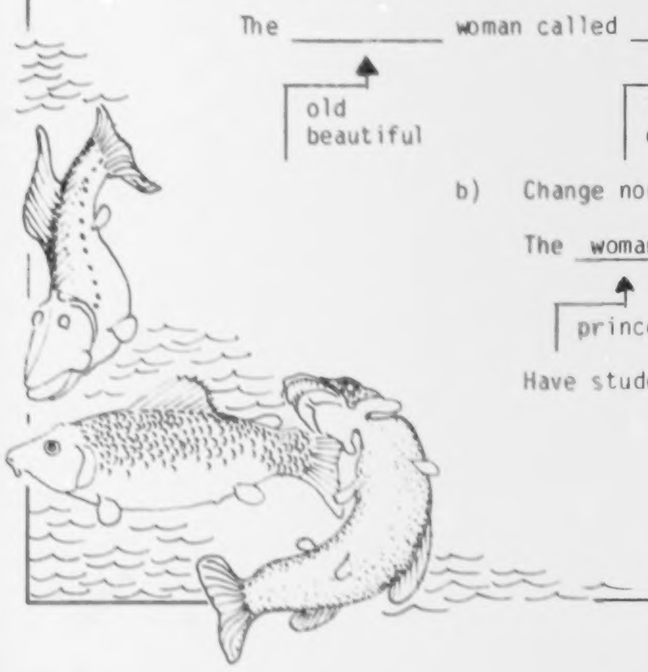
The woman called to her husband.

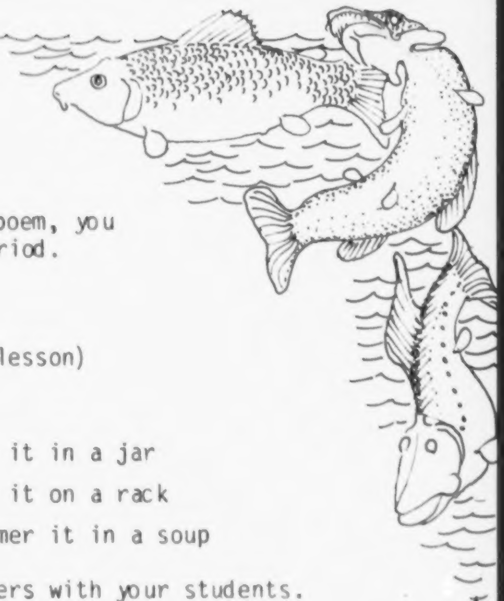
princess

screamed

her stepmother

Have students illustrate their new stories.





LESSON: **WE EAT FISH**

As this lesson emphasizes language related to a poem, you may wish to teach it during your Language Arts period.

English Vocabulary (* actually developed in this lesson)

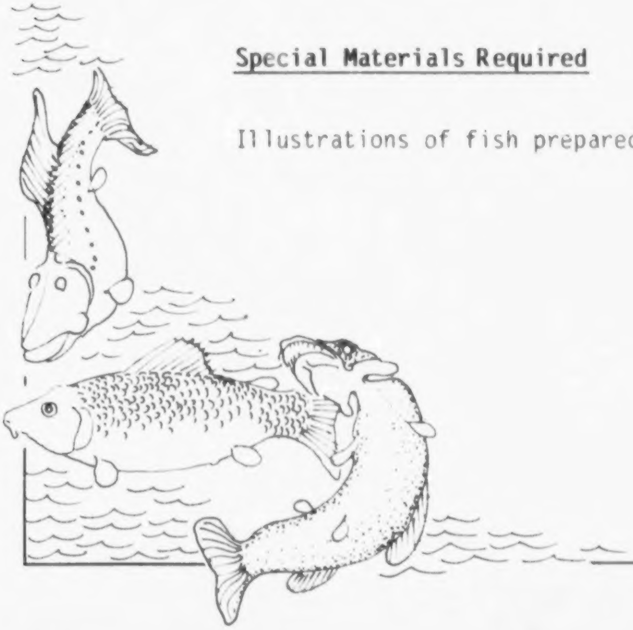
dip it in a batter
fry it in a pan
smoke it over the fire
can it in a jar
dry it on a rack
simmer it in a soup

Note: These are only suggestions, brainstorm others with your students.

English Sentence Patterns (* actually developed in this lesson)

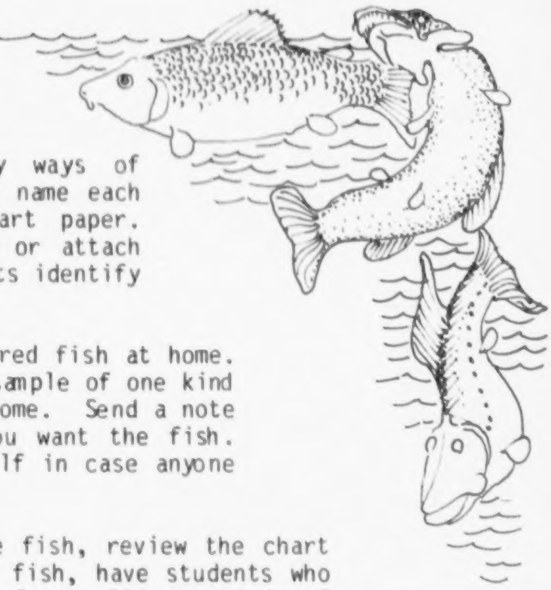
* What will you do if you catch a fish
catch a fish
catch a fish?
What will you do if you catch a fish
And you want to eat it?

* You might ___________________.
And then you'll eat it up.



Special Materials Required

Illustrations of fish prepared in different ways



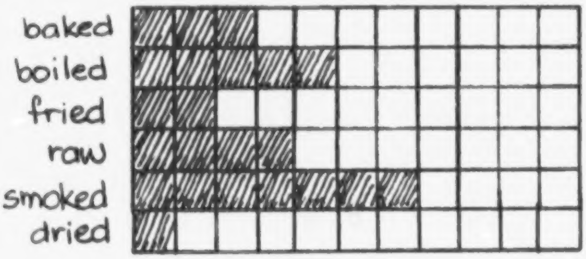
Concept Development/Language Exposure

1. a) Ask the students to name as many ways of preparing fish as possible. As they name each one, make a list on experience chart paper. Have students illustrate each method or attach prepared illustrations to help students identify them.

   b) Ask students if they have some prepared fish at home. Ask for volunteers to bring a small sample of one kind of prepared fish that they have at home. Send a note home with students explaining why you want the fish. (You might want to bring some yourself in case anyone forgets.)

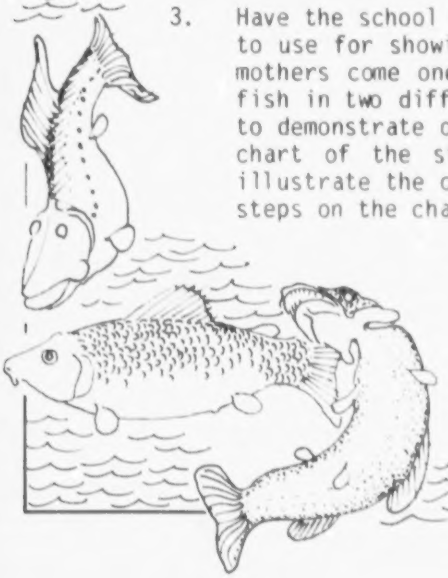
   c) The next day when students bring the fish, review the chart with them. As you name each kind of fish, have students who brought that kind bring up their samples. Add any kinds of fish prepared differently from what you have on the list.

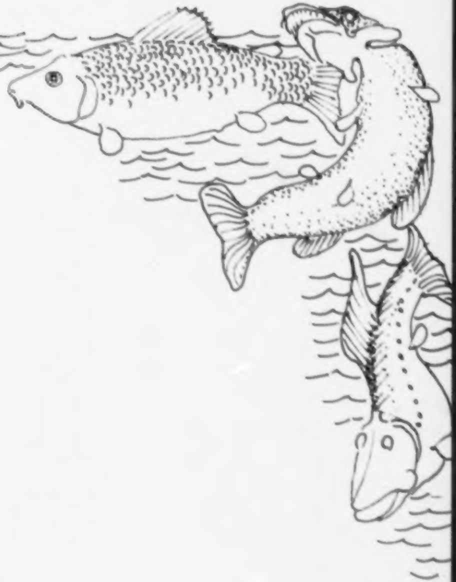
   d) Have students taste a little bit of each kind of fish and make a graph of their favourites:



2. Visit the local store to find out and record how fish can be bought there. Purchase examples which are different from those students brought from home. Have another tasting party and graph the results. Compare the two graphs.

3. Have the school buy some fish or have parents give your class some fish to use for showing how to prepare fish in different ways. Have several mothers come one day and show students in small groups how to prepare fish in two different ways. Have several other mothers come another day to demonstrate other ways. After each demonstration, make an experience chart of the steps required to prepare the fish. Take pictures to illustrate the charts if possible. After each demonstration, review the steps on the chart.





4. Using the chart from CD/LE Activity #1a) or the experience charts from CD/LE Activity #3, recite the following poem:

"What will you do if you catch a fish,
catch a fish,
catch a fish,
What will you do if you catch a fish
And you want to eat it?

You might fry it in a pan,
fry it in a pan,
fry it in a pan,
You might fry it in a pan,
And then you'll eat it up!

You might smoke it on a fire,
smoke it on a fire,
smoke it on a fire,
You might smoke it on a fire,
And then you'll eat it up!"

Language Practice

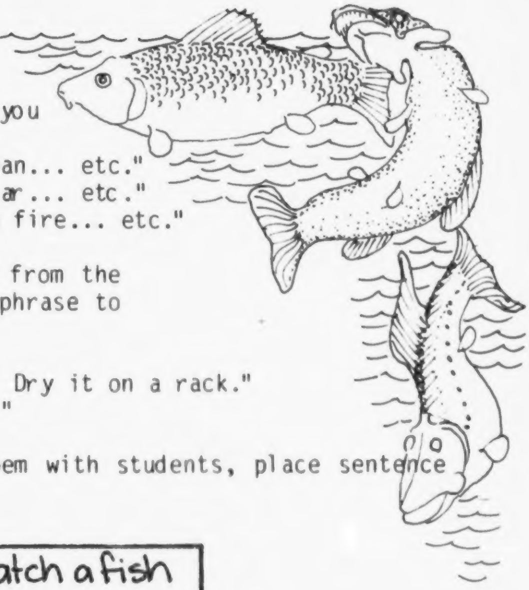
L 1. Which Picture?: Illustrate on a stencil, or have students each make small drawings of each of the ways to prepare fish. Students can cut or tear out each picture. Recite the poem again, mixing up the verses. Students hold up the appropriate picture for each verse.

L 2. Flashlight Game: Tape pictures around the classroom. Call out a line/verse from the poem. One student shines a flashlight on the appropriate picture.

L 3. a) Dramatization: Divide students into pairs or threes. Recite the poem again, changing the sequence of the verses. Students act out each verse using their bodies to illustrate the way the fish is being prepared. Let students use sound effects as well, if it is not too distracting!

L/S b) After students have had an opportunity to practice their actions for each verse several times, have each group choose one to share with the rest of the class. Other groups must guess which verse they are demonstrating.

S 4. Choral Speaking: Divide the class into several groups. One group will chant the question; each of the other groups will chant one of the responses:



E.g., Group 1: "What will you do if you
catch a fish... etc."
Group 2: "You might fry it in a pan... etc."
Group 3: "You might can it in a jar... etc."
Group 4: "You might smoke it on a fire... etc."

L/S 5. Substitution Drill: Make a statement from the poem and provide students with a word/phrase to substitute. For example:

Teacher: "You might fry it in a pan. Dry it on a rack."
Students: "You might dry it on a rack."

S/R 6. Sentence Strips: As you chant the poem with students, place sentence strips in a pocket chart.

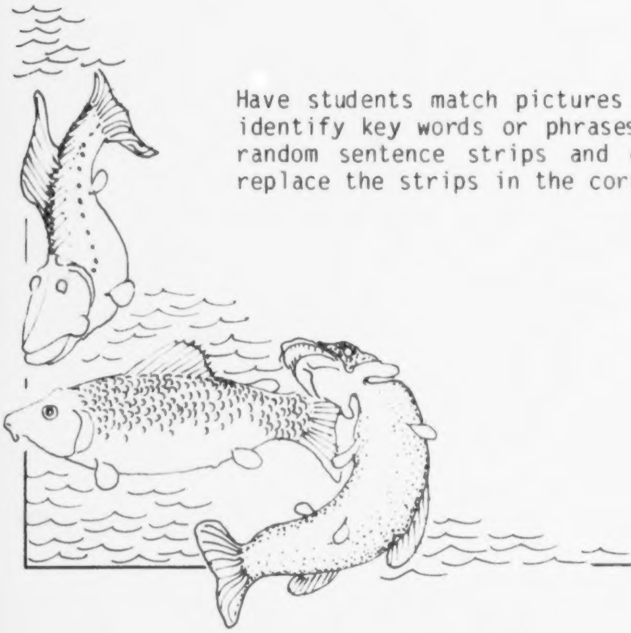
What will you do if you catch a fish

catch a fish

catch a fish

What will you do if you catch a fish

And you want to eat it?



Have students match pictures to the appropriate verses. Have students identify key words or phrases. Chant the poem several times. Remove random sentence strips and distribute these to students. Have them replace the strips in the correct places.

W 7. Vanishing Drill: Prepare a worksheet for students to complete individually. Leave the sentence strips in the chart as a reference.

What will you do if you catch a fish
_____ a fish
_____ a _____
What ___ you do ___ you _____ __ _____
And you want to eat it?

You might fry it in a pan
____ it __ __ pan
____ __ __ __ ____
And then you'll eat it up.

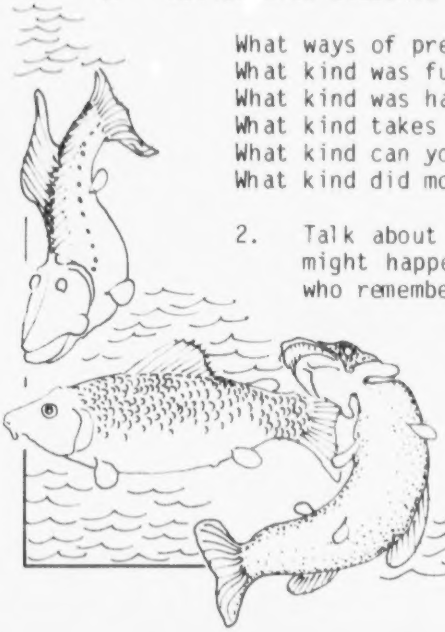
W 8. Books: Give a little book of four blank pages to each student. Ask them to remember four of the ways to prepare fish. They can draw pictures showing each being prepared and copy/trace the appropriate sentence from the chart or a model you provide.

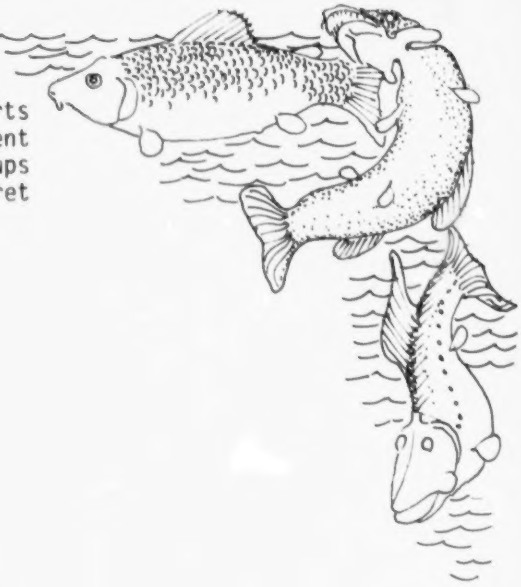
Application

1. Review with students what you did during the Concept Development activities.

What ways of preparing fish did we learn?
What kind was fun to make?
What kind was hardest to make?
What kind takes longest?
What kind can you eat right away?
What kind did most students like best?

2. Talk about the reasons why fish are so important to people. What might happen if there were no fish? Have students talk to elders who remember a time when there wasn't enough to eat.





3. Using the ideas from the experience charts developed during the Concept Development activities, divide the class into small groups and have each group write a poem using Margaret Wise Brown's "I Like Bugs."

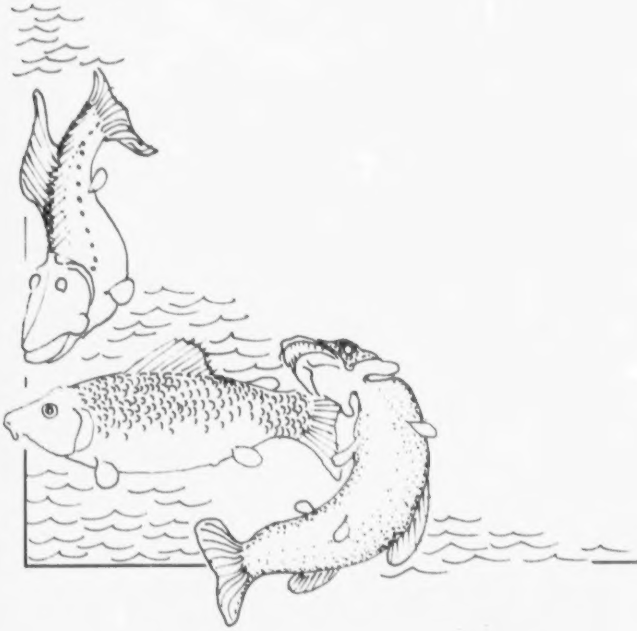
   E.g., I like fish.
   Dried fish.
   Canned fish.
   Fried fish.
   Smoked fish.

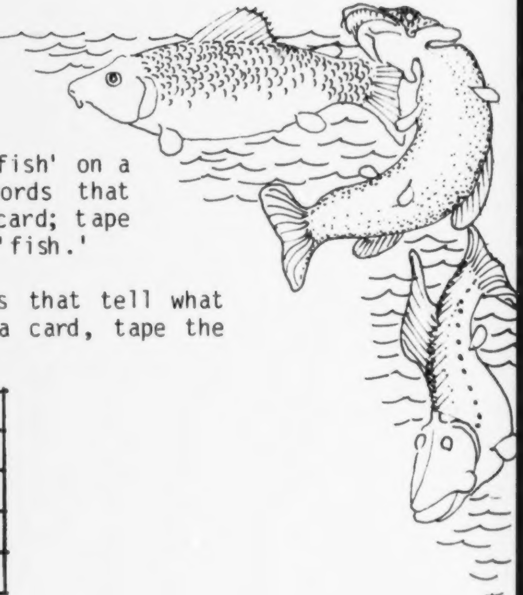
   I like fish.
   Fish on a fire.
   Fish in a pan.
   Fish on a rack.
   Fish in a can.

   I like fish!

4. Have a fish feast. Prepare several fish dishes. Write invitation to parents and elders on fish shaped cards.

5. Compile a cookbook of fish recipes. Provide a copy for each student to take home.





CULMINATING ACTIVITIES

1. a) Build a word ladder: Write the word 'fish' on a card and have students brainstorm words that describe fish. Write each word on a card; tape the cards ladder-style above the word 'fish.'

Now, ask students to brainstorm words that tell what fish do. Again, write each word on a card, tape the cards below the word 'fish.'

slippery
shimmering
scaly
silvery
slimy
fish
splashed
leapt
swam
flicked

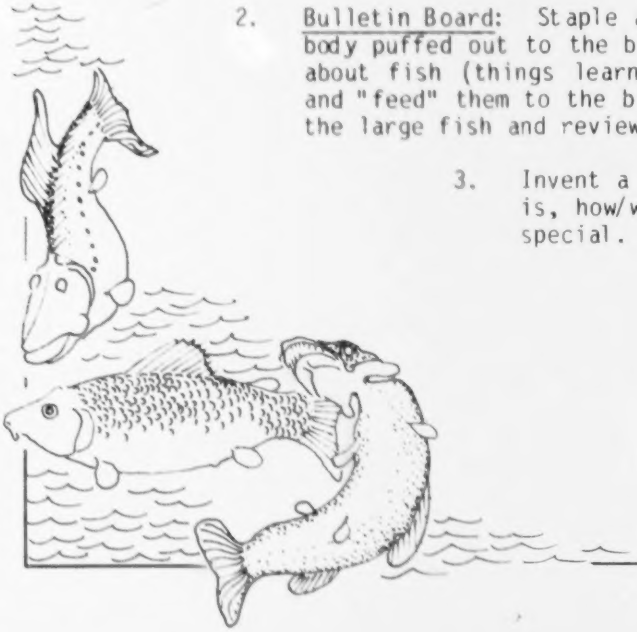
b) Give students blank sentence strips. Have them select words from the ladder to build into sentences, adding other words where necessary. For example:

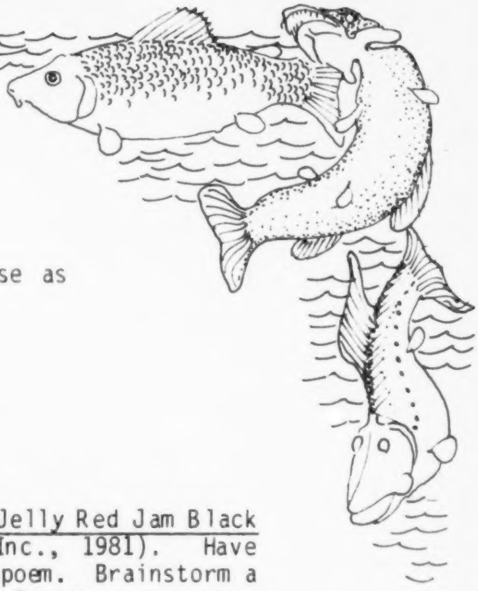
The shimmering fish leapt from the water.

Students may also wish to illustrate their sentences.

2. Bulletin Board: Staple a large paper fish with its mouth open and body puffed out to the bulletin board. Have students write facts about fish (things learned during the unit) on small fish shapes and "feed" them to the big fish. At the end of the unit, open up the large fish and review what you have learned about fish.

3. Invent a new fish. Tell why it is shaped like it is, how/what it eats, where it lives and why it is special.





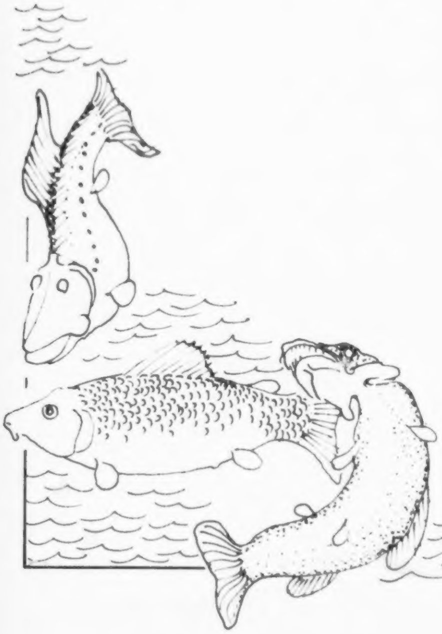
4. Make up silly sentences about fishing, then illustrate them. For example:

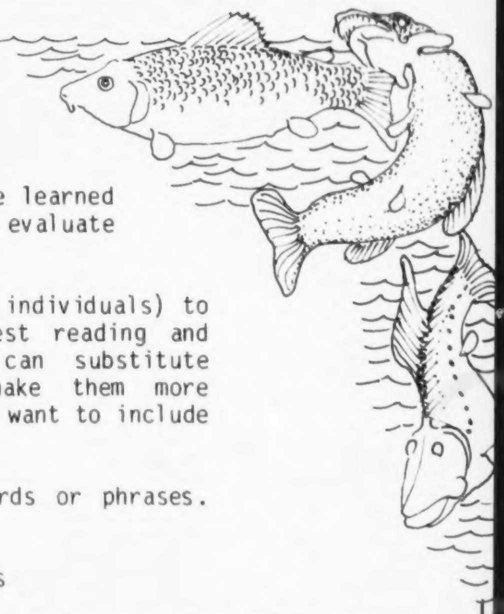
   I went fishing for a char,
   But instead I caught a car.

5. Make up silly verses for this song: (Try to use as many species names as possible.)

   E.g., A-fishing we will go,
   A-fishing we will go,
   We'll catch a little cod
   And name him Rod,
   A-fishing we will go.

6. Read the poem "Fish" from *Yellow Butter Purple Jelly Red Jam Black Bread* by Mary Ann Hoberman (Viking Penguin, Inc., 1981). Have students perform the movements described in the poem. Brainstorm a list of other words that tell what fish do. Create a new poem using these words.





EVALUATION ACTIVITIES

It is important to assess what your students have learned during this unit. The following activities evaluate language and concepts.

You can do them orally (in small groups or with individuals) to test listening and speaking or on paper to test reading and writing. These are only suggestions; you can substitute different content or vocabulary items to make them more appropriate for your students. You probably will want to include many other activities as well.

1. Tell or give the students four or five words or phrases. Have them indicate which do not belong.

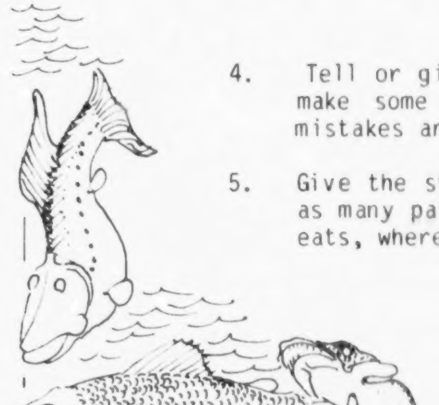
   fish: fur fins scales tail gills

2. Tell or give the students sentence beginnings to match to sentence endings.

Fish have gills	to help them steer.
Fish have scales	to help them breathe.
Fish have fins	to protect them.

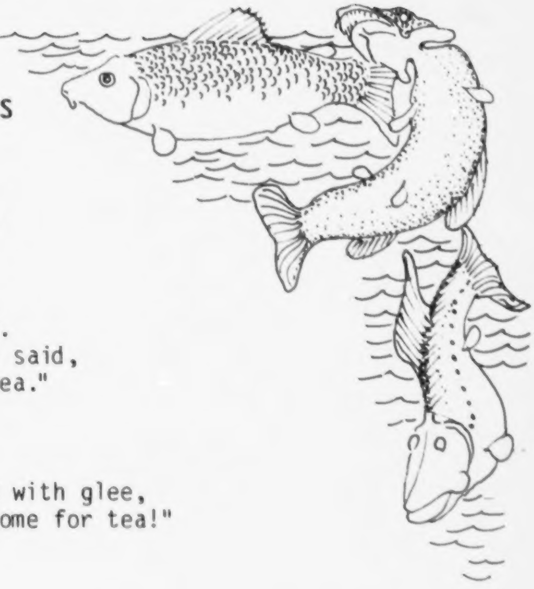
3. Tell or give the students the beginning of a sentence and a number of possible sentence endings. They indicate which sentence endings are appropriate for the sentence beginning.

Some fish live	on the land. in the ocean. in rivers and lakes.
Some fish eat	other fish. ice cream. plants. insects. frogs.



4. Tell or give students a simple story about a fish. Deliberately make some mistakes in the story. Students try to catch your mistakes and correct them.

5. Give the students a picture of the outside of a fish. They label as many parts of it as they can and write or tell about what it eats, where it lives, etc.



POEMS, SONGS AND STORIES

Little Johnny
(Author Unknown)

Little Johnny fished all day,
Fishes would not come his way.
"I've had enough of this," he said,
"I'll go home and have some tea."

When the fishes saw him go,
Up they came all in a row;
They jumped about and laughed with glee,
And shouted, "Johnny's gone home for tea!"

My Fish
(Author Unknown)

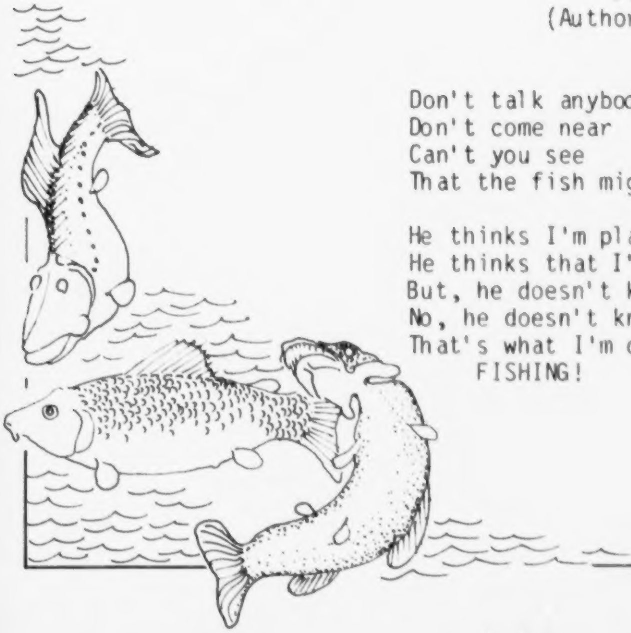
I have a funny little fish
He swims around all day.
But when I look into his bowl,
He thinks it's time to play.

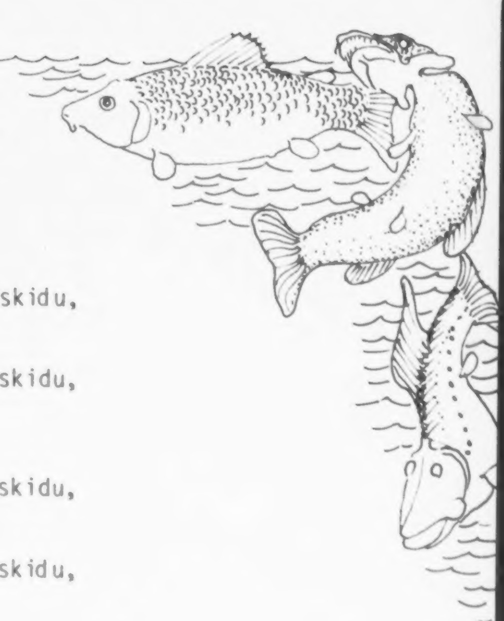
He swims straight up
And dives straight down,
He waves his fins at me.
And then he flips his tail so fast,
That I can hardly see.

Fishing
(Author Unknown)

Don't talk anybody
Don't come near
Can't you see
That the fish might hear.

He thinks I'm playing with a piece of string
He thinks that I'm another funny sort of thing
But, he doesn't know I'm fishing
No, he doesn't know I'm fishing
That's what I'm doing
FISHING!





Apusski Dusky
(Traditional)

In middle ocean
Sardines are swimming,
     Apusski dusky, apusskidu,
A boat sails over,
Down comes a net.
     Apusski dusky, apusskidu,

One wise sardine
Flicks out a warning.
     Apusski dusky, apusskidu,
Swift through the water
They dart away
     Apusski dusky, apusskidu,

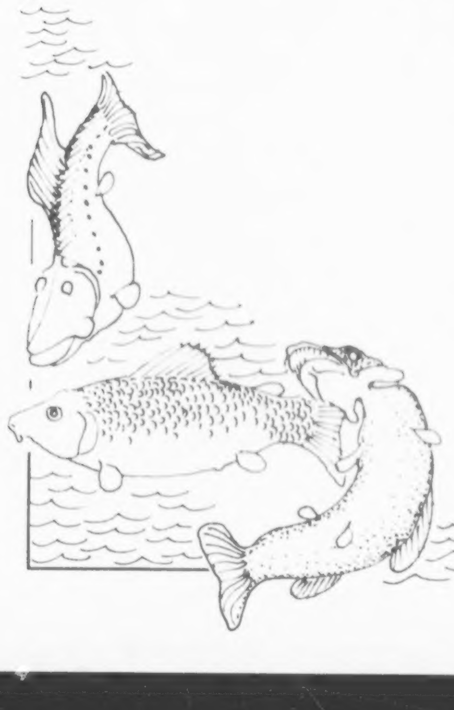
With tails a-flashing.
Sardines are swimming,
     Apusski dusky, apusskidu,
So full of joy that
They're swimming free.
     Apusski dusky, apusskidu,

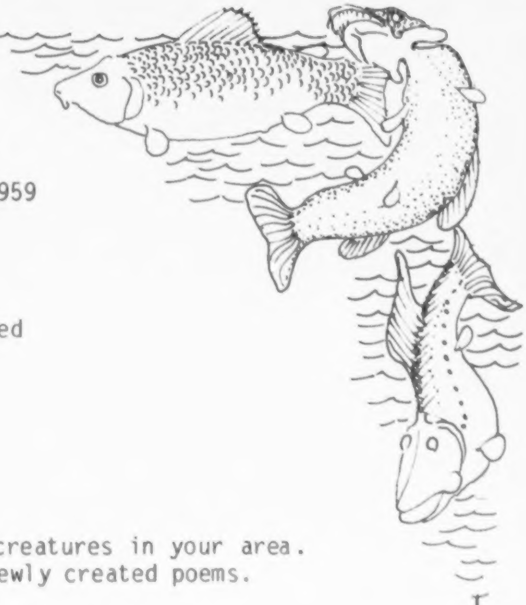
Did You Ever?
(Traditional Skipping Chant)

Did you ever go a-fishing on a sunny, sunny day?
Sat down on a log and the log rolled away?
Put your hands in your pockets and
Your pockets in your pants,
And all the little fishies do the hootchy-kootchy dance?

A Sardine Fish is Small and Thin
From: More Stuff and Nonsense
By Doug MacLeod
Collins

A sardine fish is small and thin
And fits inside a sardine tin.
A shark is big and never fits
Unless he's chopped in little bits.





Way Down Deep

From: Hello and Goodbye
By Mary Ann Hoberman
Russell & Volkening, Inc., 1959

Underneath the water
Way down deep
In sand and stones and seaweed
Starfish creep
Snails inch slowly
Oysters sleep
Underneath the water
Way down deep.

Brainstorm new lines for the poem about aquatic creatures in your area. Make a bulletin board display incorporating the newly created poems.

Fishy in the Pan

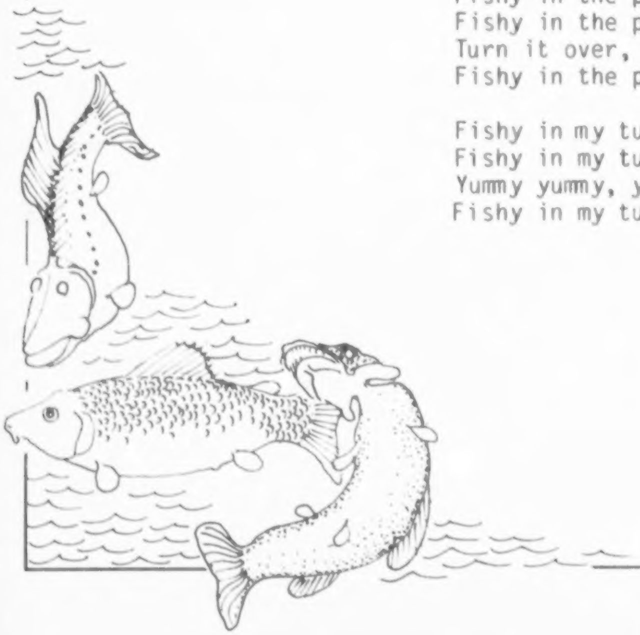
Adapted from the original "Jelly in the Bowl"
By M. Gilmour

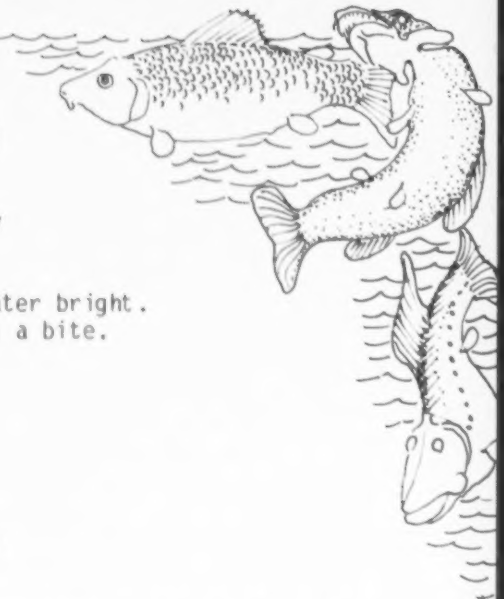
Fishy in the net
Fishy in the net
Wiggle waggle, wiggle waggle
Fishy in the net.

Fishy on the hook
Fishy on the hook
Flip flap, flip flap
Fishy on the hook.

Fishy in the pan
Fishy in the pan
Turn it over, turn it over
Fishy in the pan.

Fishy in my tummy
Fishy in my tummy
Yummy yummy, yummy yummy
Fishy in my tummy.





Little Fish
(Author Unknown)

Little fish goes out to play
He wiggles his fins,
Then swims away.
He swims and swims in the water bright.
He opens his mouth and takes a bite.
Mmmmm! Tastes good!

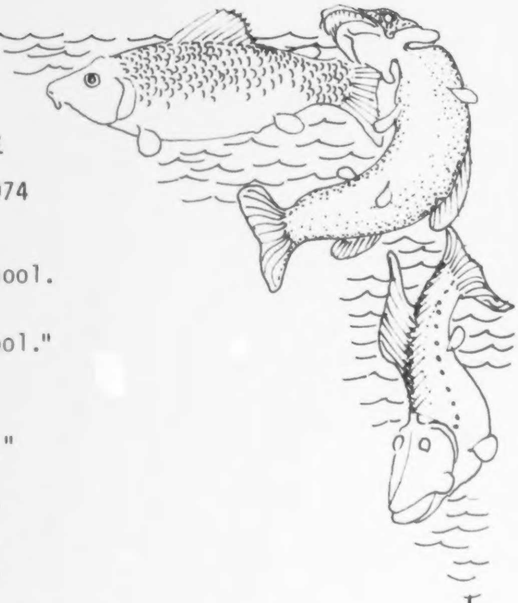
Develop appropriate actions.

Action Rhyme
(Author Unknown)

I hold my fingers like a fish (Place one hand on top of the other)
And wave them as I go. (Wave hands through the air to
See them swimming with a swish resemble a swimming fish.)
So swiftly to and fro.

Five Little Fishes
(Author Unknown)

Five little fishes were swimming near the shore
One took a dive, then there were four.
Four little fishes were swimming out to sea
One went for food, then there were three.
Three little fishes said: "Now what shall we do?"
One swam away, then there were two.
Two little fishes were having great fun
One took a plunge, then there was one.
One little fish said: "I like the warm sun."
Away he went and then there were none.



Ten Little Fishes

From: With a Deep Sea Smile
By Virginia A. Tashjian
Little, Brown and Company, 1974

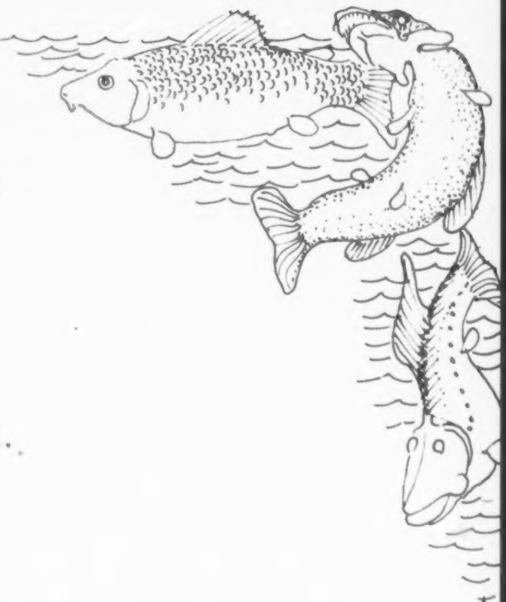
Ten little fishes were swimming in a school.
(Pointing to each finger in turn.)
This one said, "Let's swim where it's cool."
This one said, "It's a very warm day."
This one said, "Come on, let's play."
This one said, "I'm as hungry as can be."
This one said, "There's a worm for me."
This one said, "Wait, we'd better look."
This one said, "Yes, it's on a hook."
This one said, "Can't we get it anyway?"
This one said, "Perhaps we may."
This one, so very brave, grabbed a bit and swam away.

A Baby Sardine

From: A Book of Milliganimals
By Spike Milligan
Penguin Books

A baby Sardine
Saw her first submarine:
She was scared and watched through a peephole.

"Oh, come, come, come,"
Said the Sardine's mum,
"It's only a tin full of people."



Beat Me and Bite Me

From: Garbage Delight
By Dennis Lee
Macmillan of Canada, 1977

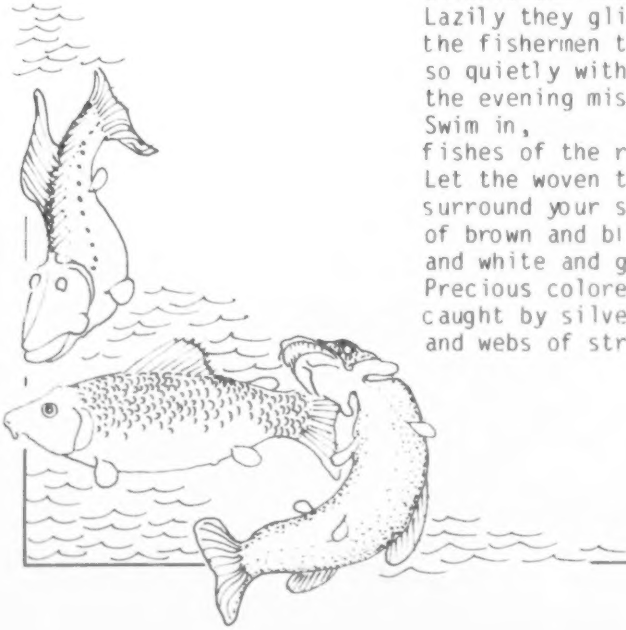
Beat me and bite me
And teach me to bark,
I looked in the water
And there saw a shark.

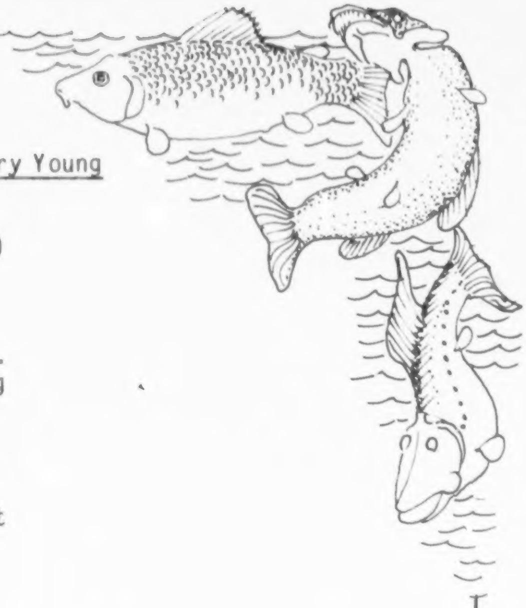
I looked in the shark,
And it showed me its jaws.
And that is the reason
I'm not, though I was.

Silver Knots

From: Winter Wishes, Summer Dreams
Dyan Collins Harpe
Highway Book Shop, 1979

Swim in,
fishes of the river.
Our nets are waiting silently,
beneath the bobbing boats.
Fences stretching underneath
a field of clear blue water
spreading out across the crystal bay.
Gathering the cool and slippery harvest,
of the north.
Arctic char and sturgeon,
pickerel and pike,
speckled, brown, and rainbow trout,
stikkleback and chub.
Lazily they glide toward,
the fishermen that wait,
so quietly within,
the evening mist.
Swim in,
fishes of the river.
Let the woven traps
surround your scaly bodies,
of brown and blue,
and white and grey.
Precious colored gems
caught by silver knots,
and webs of string.





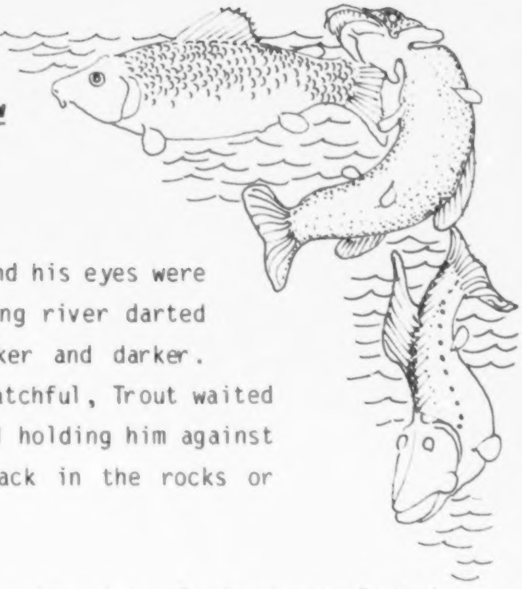
FISH

By Arthur S. Bourinot

From: Read Aloud Rhymes for the Very Young
Selected by: Jack Prelutsky
Alfred A. Knopf, 1986
(Random House of Canada, Inc.)

The little fish are silent
As they swim round and round.
Their mouths are ever talking
A speech without a sound.

Now aren't the fishes funny
To swim in water clear
And talk with words so silent
That nobody can hear?



The Trout That Stole the Rainbow

National Film Board, 1978

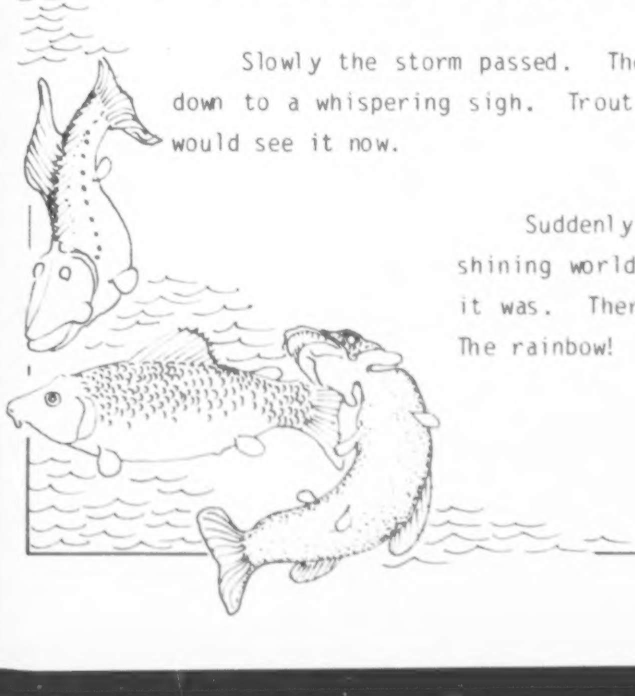
Trout's tail flicked lazily back and forth and his eyes were watchful, waiting. The other fish in the rippling river darted about anxiously watching the sky. It grew darker and darker. What was coming? What was coming? Silent and watchful, Trout waited under the overhanging bank, his slowly waving tail holding him against the current. But the other fishes found a crack in the rocks or burrowed in the sand.

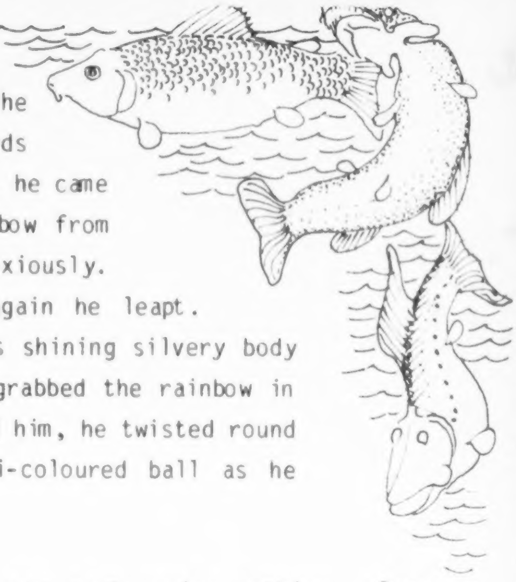
The wind blew stronger. Along the bank the branches of the trees lashed about and the surface of the river was crisscrossed with rigid patterns as the wind blew in all directions. Great dark clouds covered the sun and raced across the sky. Trout lay still, waiting. Across the field, Trout could see a curtain of rain advancing slowly. It blurred the waving grass and the willow trees. Then it was over the river and all sounds stopped except the heavy patter of the rain on the surface of the river. Suddenly a great clap of thunder overrode the sound of the rain and the sudden flare of lightning made the fish burrow deeper in their shelters. All except Trout, who hung there, patiently waiting.

The wind blew even stronger. Branches crashed down and the surface of the water rolled and tossed. The sky darkened 'til it was night at midday. Trout moved expectantly. Soon it would come!

Slowly the storm passed. The river gurgled gently. The wind quieted down to a whispering sigh. Trout edged out from under the bank. Surely he would see it now.

Suddenly, the sun broke from behind a cloud and a shining world began to appear. Trout trembled. There it was. There it was! A shining arc across the sky! The rainbow!





To Trout it was the most beautiful thing in the world. His tail lashed wildly as he swam towards it. Surely there was nothing more beautiful. As he came to the edge of the river, the bank hid the rainbow from view. He leapt high in the air and watched it anxiously. Would it disappear again so soon? Again and again he leapt. Finally, gathering all his strength, he flung his shining silvery body high in the sky. Just as he started to fall he grabbed the rainbow in his mouth. As he fell, pulling the rainbow behind him, he twisted round and round until he looked like a gorgeous multi-coloured ball as he dropped back into the river.

The other fish watched him fearfully as he swam past, seeing nothing. Over and over he rolled. Round and round he swam, the colours swirling and whirling around him, until exhausted, he settled for the night wrapped in his beautiful blanket of colour.

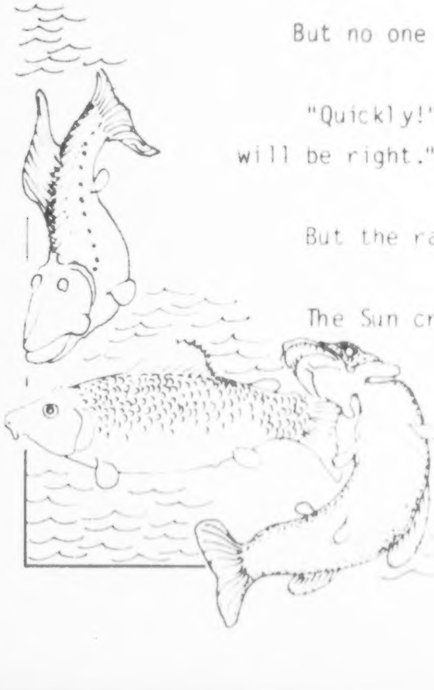
The next morning the sun rose slowly over the horizon and surveyed the glistening world. Startled, the sun looked around. What had happened? What had happened? The sky, the grass, the trees, the river - nothing was right! Everything was a dull, muddy, gray brown. What had happened to the colours? The sun shone brighter and brighter, turning her rays first this way and then that. But the world still stayed a dull gray. "Where are the colours?" cried the Sun. "Where are the beautiful colours?"

But no one knew.

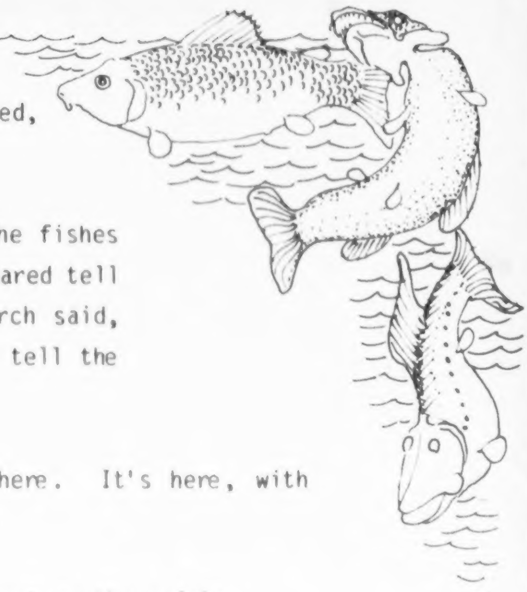
"Quickly!" said the Sun, "get me the rainbow and then the colours will be right."

But the rainbow was not to be found.

The Sun cried out, "Who has stolen the rainbow?"



All the animals and birds looked at one another, but no one knew.



Again, in a loud stern voice, the Sun called, "Who has stolen the rainbow?"

She called so loudly this time that even the fishes heard. They looked from one to the other. Who dared tell the Sun? No one moved. Then a small, slim perch said, "We cannot let Trout keep the rainbow. We must tell the Sun." She swam to the surface.

"Sun, Sun!" she called. "The rainbow is here. It's here, with Trout inside it."

In a terrible voice, Sun commanded Trout to return the rainbow.

Reluctantly, swirling his beautiful garment, Trout rose to the surface. Slowly he unwound the shimmering ribbon of colour.

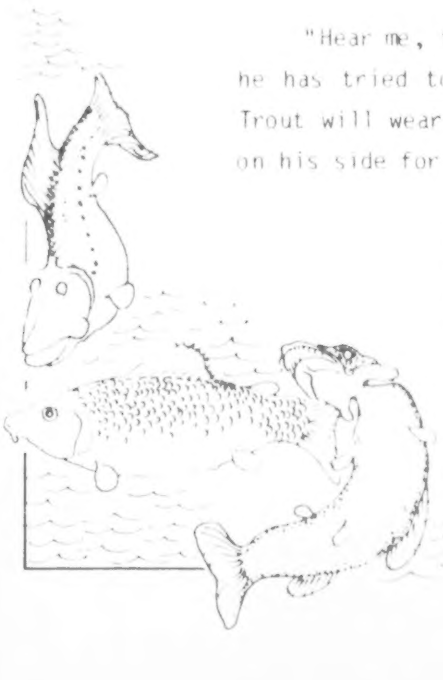
Angrily, Sun snatched the rainbow. She sorted the colours one after the other, and finally the world looked right again.

When she had finished, Sun shone down strongly on the river. "Fishes!" she called. "Fishes, come to the surface and hear what I have to say."

The fishes gathered at the surface with Trout hiding sullenly just below.

"Hear me, fishes," said the Sun. "Trout has been selfish. Because he has tried to keep so much beauty for himself, he must be punished. Trout will wear the rainbow he loved so much forever. He will wear it on his side for all to enjoy, but hidden from his own eyes forever."

(This story is available as a filmstrip/cassette package from the National Film Board. The filmstrip is beautifully illustrated and skillfully narrated. It will appeal to students of all ages.)



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